ART EFFECT and new paint program, p.13

The **essential** magazine for Amiga enthusiasts

AMIGA SHOPPER

Issue **67** October 1996 **£4.50** US $9.95 ● Hfl 19.95

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Full details on page 8

X-DVE 2.5

Watch out ClariSSA? Here's a new approach to Amiga video digital effects at a very low cost.



Inside this issue

- **Caught up in the 'Net:** A real look at the WWW from the Amiga owner's perspective. Is it worth it?
- **X-DVE 2.5:** A first look at the brand new version of the video effects package from Italy.
- **Clarissa Pro:** The established video package is also back and offers even more than ever before.
- **Epson Stylus Colour 500 and Stylus 500:** Do they really offer anything new and can the Amiga manage printouts that can compete with other plaforms?
- **3.5" hard drive:** Designed to be easy to fit, could this drive make life easier for the DIY shy?
- **CD-ROMs:** Three new CD titles come under scrutiny.
- **Amiga Answers:** The best answers section continues t solve your reader problems.
- **CanDo:** The tutorial based on the Coverdisk continues to help you get the most out of it.
- **Programming:** HiSoft BASIC and AMOS tutorials

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Inside issue

Not another feature on the WWW? But wait, there is reason behind the madness...

Yes, I know what everyone is thinking. Why on earth, given all the coverage that other magazines have given to the WWW, are we doing it too? Well, we thought that nobody had actually done anything that useful for the real Amiga users. So we sent out Ben Vost to find exactly how well the different service providers cater for the Amiga. We then took a look at the WWW browsers themselves to see how they compare to each other and how they compare to the professional versions that are storming other platforms. Can Shareware really compete with the likes of Netscape? Yes, after all the hype of other magazines, we're bringing you a frank, honest and incisive look at the truth behind the Internet – Amiga style.



Elsewhere in the issue, we've got the review of ClariSSA Pro that we had hoped to bring you last month and an exclusive first review of another video animation package X-DVE 2.5. To bring you the very latest version, we arranged a transfer through the Internet - you see it can definitely be very useful for Amiga owners. You'll be glad to know that although there are no UK distributors, we have agreed to take it on and sell it directly to you for a limited period in order that people can get hold of it. There's also reviews of the new printers from Epson and a new word processor for the Amiga.

The News section is as packed as ever to keep you right up-to-date with world Amiga events and our tutorials continue to help you get the best out of your software. AMOS is back after a month away, so you can now stop writing to me.

As you'd expect, the letters pages has its fair share of complaints about our diminishing size and loss of Coverdisk, but I'm afraid I canna change the laws of economics. We do the best we can and although I'm keen to hear from all our readers, please don't write to me about something I have no control over whatsoever as if it's some devious plan of mine! If it were up to me *AS* would be hundreds of pages long and delivered free, but I don't think that you'd see many issues before we went out of business.

Once more, I'm deeply sorry for the state of the magazine, but it was this or no magazine. At least you can decide for yourselves and if you do decide for us, the remember that subscribing offers you an extra disk and a lower price. Call 01225 822511 for more details.

Until next month, enjoy.

David Taylor
Deputy Editor

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E-mail: aball@futurenet.co.uk

COVERDISKS: If you have a contribution, commercial or otherwise, that you would like to submit for consideration for the Coverdisks, send it to Dave Taylor.

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Turn the page for the contents of issue **67**

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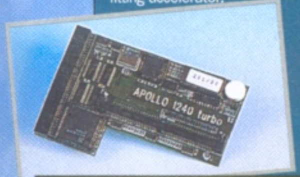
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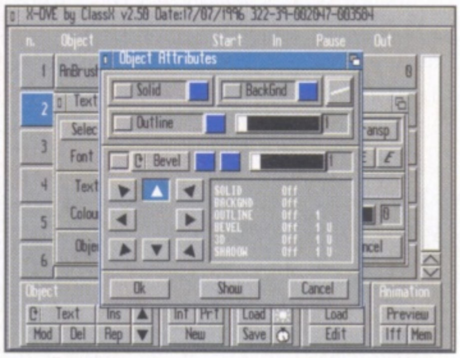
From the M62 Junction 17 head towards Bury. We are 50 yards on the right hand side after the third set of lights. The door to our premises is next to the florists opposite the Masons Pub.

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AMIGA SHOPPER



The new version of X-DVE has been zapped across to us especially for this review.



Not one, but two new printers from Epson get a thorough going over by Larry.



John Kennedy continues with the tutorial based on AS62's Coverdisk, CanDo 2.51.



Can it really be made easy for you to create games like this? Find out in the PD section.

Caught up in the 'Net!

Ben Vost has been out and about finding out the ins and outs of Amiga 'Net surfing. The best software to use, the right provider to choose and the sites to visit. We tell you all.

Page **15**

Shopper**Disk**





Cover disk

David Taylor *gets you started with this month's selection of the very best programs and utilities taken from the exciting new Shareware releases.*

This month has seen many updates of some of the best Amiga Shareware programs released. We've got lots of them here for you as well as some original packages and the code for the tutorials. There are programs for creating fonts, cataloguing pictures to create your own library, a video effects package and more, including the comprehensive yet compact Workbench enhancer, MultiCX.

ApplicationZone

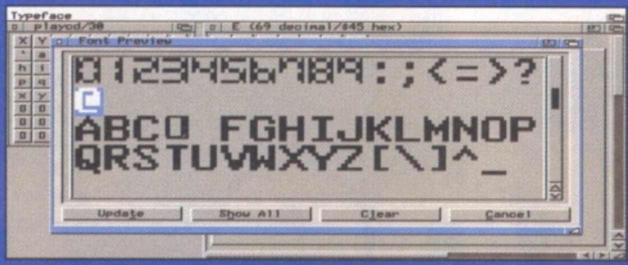
TypeFace 1.2

Author: David Kinder

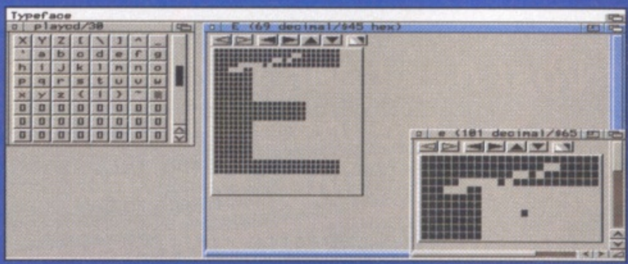
The Amiga uses two types of fonts, on the whole, bitmap and outline. The bitmap font is the one which most people are aware of and consists of a set of predefined pixel settings, that is to say that each size of the font has to be stored in a separate file because it is rigid. The font is made up of the ???.font file and then the actual fonts in different sizes stored in a directory of the font's name – all of which is kept in the fonts: directory. Outline fonts store the data differently as a set of curves so that a single font can be resized to any size, not just one for which a predefined file exists.

TypeFace is a program that is capable of editing or creating bitmap fonts. In addition, you can load in outline fonts at a specific size, alter them too if you want, and save them out as bitmaps. To use the program you must install it first because it requires the bgui.library which is included in order to run. When you first run the program, you will see a window which contains all the characters possible in a font. If you click on a character, a second window will open which will show you a magnified picture of the font illustrating how each pixel is on or off to produce the font.

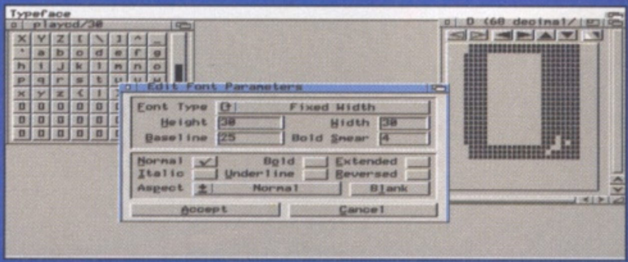
To load a new font, simply select Open Font from the Project menu. It will take a while to open up because it first has to read the entire font directory. You will see a preview of the font in the requester, so you won't have any trouble finding the look you are after. When you want to change any part of a font's appearance, click on the letter you want to edit in the master window and then left click on the pixel you want to change. Because the pixels can only be on or off, it's a simple matter of a click adding or removing an 'on' pixel.



You can preview your fonts when you are creating them using the menu option.



Fonts can be viewed at different sizes and edited at any size.



Font parameters should be set for each font when you work on them.

Because many fonts can be quite large, you may find it a bit difficult to get an overview of the font at the size it is being displayed. To change this, you can zoom out using the menu item from the Character menu. Equally, you can zoom in further if you need to. Don't forget when you work on a font that it consists of both lowercase and uppercase characters!

To help you create your fonts, you can make use of a couple of the tools available. Cutting and pasting letters, which can be done either from the menus or using standard shortcuts, allows you to base a set of characters around one that you designed, and you can also flip characters horizontally or vertically. If you choose the Edit Font Parameters from the Font menu you can select the different options, like Size, 'bold smear' and font type. When you're happy with your font, save it out, specifying both the size and the name.

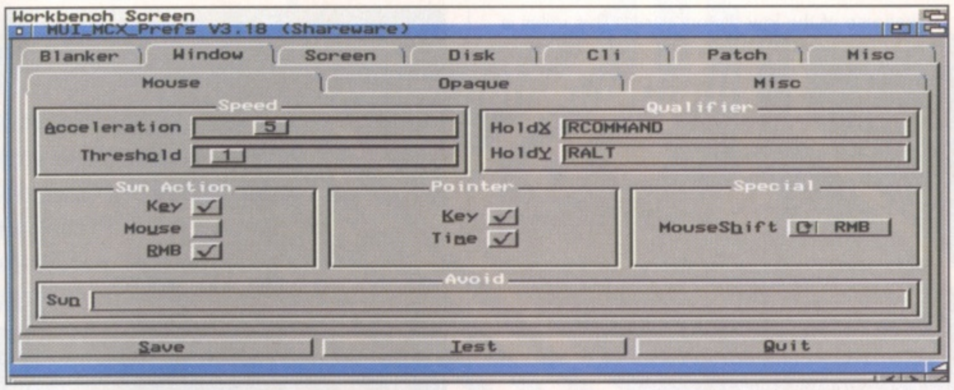
PicView 2.02

Author: Holger Papajewski

This is a picture cataloguer which has some exceptional features. It can load any type of image using datatypes and will render a thumbnail of the picture in its window. When you start to set up the catalogue you can do so by selecting multiple files at the same time in the requester. Simply hold down the Shift key as you click on them and you can choose as many as you want. After clicking on OK, a progress indicator will show you how far it has got.

If at any time you want to view the full size picture, you can do so by double clicking on the thumbnail. You can use ARexx to set up a slideshow and check out information on individual pictures. To see this, click once on the thumbnail and then select Info from the PicView window. The program will tell you the path for the file and its name as well as the image format, its resolution, screen mode, size and any comment for it.

Clicking on the Edit button will enable you to add comments for the picture and to choose a group for the picture to belong to. You can have up to 255 groups and individual pictures can belong to up to four groups. This way, when you catalogue a set of pictures for your



The preferences program for MultiCX makes its use easy and shows just how many features it has.

own library, you can have your pictures cross-referenced rather than restricted to just a single group.

To edit the groups and to set all the other parameters for this powerful program, you need to open up the preferences from the Project menu. Within the preferences you can set the size of the preview image, its colour settings and any dithering. You can also set up ARexx scripts that are to be included and dictate whether XPK compression should be used to keep down the size of the catalogue. PicView requires Workbench 3 and MUI to run.

NWiper Pro 2

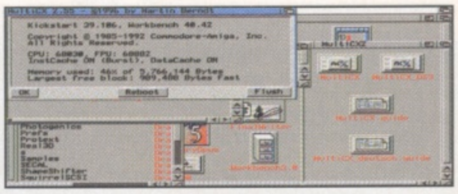
Author: Michiel den Outer

With this program you can take standard IFF files and perform some really whizzy effects, moving them around the screen and zooming them in and flipping them around.

Start off by loading in a picture and choosing a start position, then create a Key for the time in the animation where the picture should be at that position. Move the time on using the slider and reposition the picture and the create another Key. Do this as many times as you need to and then click on Play and watch the program calculate the whole animation for you.

Should you want to, you can copy and paste Keys so that animations can move through and back to set positions. You should check out the menus for different features too, like the ability to have the IFFs mapped on to a cube. You can also make use of the VR mode to move the picture to the position you want, zooming in and out and rotating it by using a combination of the mouse buttons while you move the mouse.

This program is part of the Navigator series of programs. Unfortunately, there wasn't room for the other NTitler program, but if you register you should receive a new versions of both packages and it only costs £10! And if you want to see just what NWiper Pro can do, select Demo mode from the Project menu. NWiper requires an 020 processor.



The extended About requester is just one of the many enhancements made by MultiCX.

UtilityZone

MultiCX 2.55

Author: Martin Berndt

MUI MCX Prefs 3.18

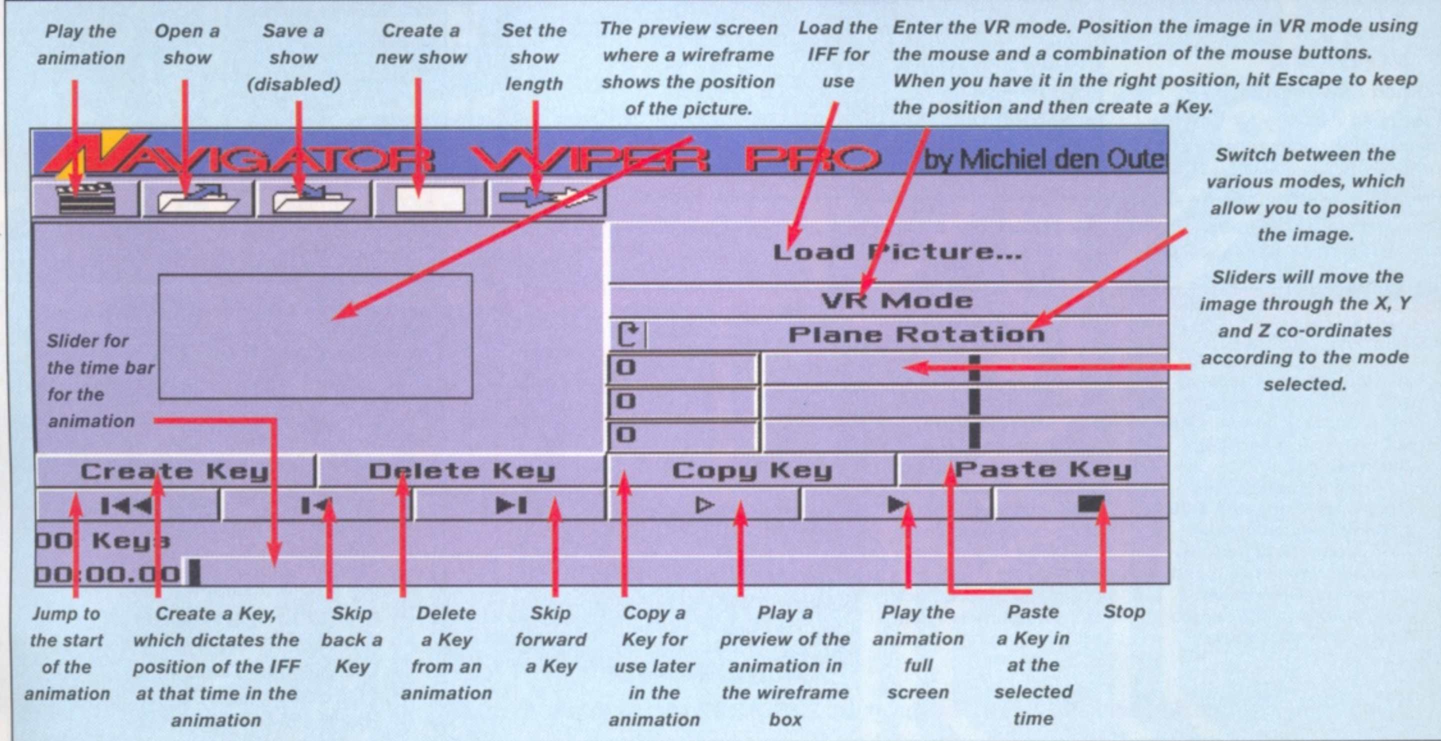
Author: Juergen Kempkes

This is an excellent utility which adds more features to Workbench than you can shake a large stick at. Let's hope some of its features will find their way into Workbench 4, but until then you can have the features now using this.

The program is started simply by double clicking on it. You can change the preferences for the program using the Tooltypes of its icons as detailed in the documentation. However, if you have MUI, you can use the excellent Preferences program which we've also included.

Among some of the features are the usual mouse acceleration, blanking and moire screen blanker as well as some really cool ones like the usage meter that sits on the left of disk windows or patches to the system including ones for the Mac emulator ShapeShifter. You can add time to the title bar and a personal favourite is the update to the Workbench About requester adding more information and the ability to flush libraries from memory.

NWiper Pro 2: details of the interface



Disk contributions

This month's disks were compiled using files from Aminet and from Walton's Mountain BBS (☎ 0181 891 5730), and with the help of the authors of the programs.

If you would like to contribute to a future disk, whether you have a full application, utility, 40K demo, clipart, font, 3D object, or even a module, send it to:

David Taylor,
Amiga Shopper Coverdisk Contributions,
30 Monmouth Street, Bath, Avon BA1 2BW.

Please only send the minimum distribution archive. Also, please do not powerpack (or similar) any files because it detracts from the archiving.

Technical**Zone**

Dunder Dir

Author: Jimmie Matsson

Finding out disk and directory contents using Dir is very useful, but a little restricted. Dunder Dir adds so many new features you'll soon wonder how you did without it. You can see only files with or below or above a specified byte size, list in columns, show sub-directories and much more. A full list of features can be found in the documentation.

Floppy 2.1

Author: Orhan Dagistanli

This Workbench 3 utility is a replacement for the standard Trackdisk device. It allows you to format DD disks in your Amiga to a capacity of 1040K or double that using HD disks if you have a compatible drive! The disks are 18 per cent faster than the standard Trackdisk ones.

To use the package, first you need to install the package and use the drive FS0 name.

FastROM

Author: Olaf Barthel

FastROM is a utility for 68040 users which remaps the KickStart ROM and low memory area into Fast RAM, which should be slightly faster. ShapeShifter users are also catered for because the emulator makes use of the low memory area. This utility is only of use for 68040 users.

Fast IPrefs 40.27

Author: Hans-W Schober

This package has obviously proved popular because it continues to be updated, and requested by *Amiga Shopper* readers. It adds many features to the WBPattern idea for displaying on Workbench and is far faster than the standard IPrefs.

AppReplaceIcon

Author: Mavati

This utility provides an Appicon that you can use to change icons attached to files or directories. When you start it, choose the icon you wish to use as a replacement (if you want to change this later, you can do so by double clicking on the Appicon). The Appicon sits on Workbench and will change the icon of an file that is dragged and dropped on to it.

MouseBeam

Author: Yello

A simple short hack that patches the mouse so that it will teleport across the screen appearing on the right hand side when you move it off the left and vice versa.

Programming**Zone**

The tutorial code for both the HiSoft BASIC and the AMOS tutorial can be found on this month's disk. The BASIC tutorial can be found on page 46 and AMOS, after a month away, can be found on page 43. ■



New features for WBPattern is just one of the advantages of the new IPrefs package.

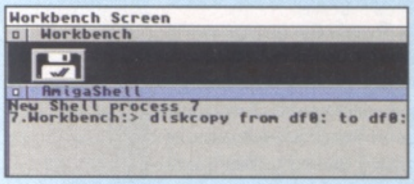
Beginners, look!



Before using this month's Coverdisk, please be sure to back it up – just in case. Simply follow the easy instructions below.



1 ***Boot up from your Workbench disk or partition, double-click on your Shell icon – to be found in your System Drawer.***



2 ***If you only have one disk drive, type in the following line and then press Return.***

```
Diskcopy from DF0: to DF0:
```

If you have two drives, place the Coverdisk in DF0: and a blank in DF1:, then type in this line instead:

```
Diskcopy from DF0: to DF1:
```

3 ***Follow the on-screen prompts and remember that the Coverdisk is the source disk and the blank is the destination.***

4 ***If you used the two-drive method, remember to rename the copy by clicking on its icon and pressing right-Amiga r.***

5 ***If you have two drives, you can also copy the disk from Workbench by dragging the Coverdisk icon over the destination disk's.***

6 ***Then place either of the Coverdisks in DF0: and reset the Amiga to boot it. It is best to boot disk 1 (or the Subs disk if you're a subscriber). This will let you install all the disks to either floppy or hard drive.***

Subscribers' disk

You can still get a second disk with *Amiga Shopper* by subscribing and receiving the exclusive subscribers' disk free.

On this month's disk there is the demo of X-DVE 2, the rather wonderful Animation effects package which we review this month on page 20. There's also ClassAction 3.2, the superb file operator that works through recognising filetypes. Then there's also SoundBox 2.7b, which can be used to edit and convert sound samples as well as AMountains, the fractal landscape generator. Blizkick 1.5b is a utility for Blizzard board users and ScreenClock is a configurable Public screen clock.



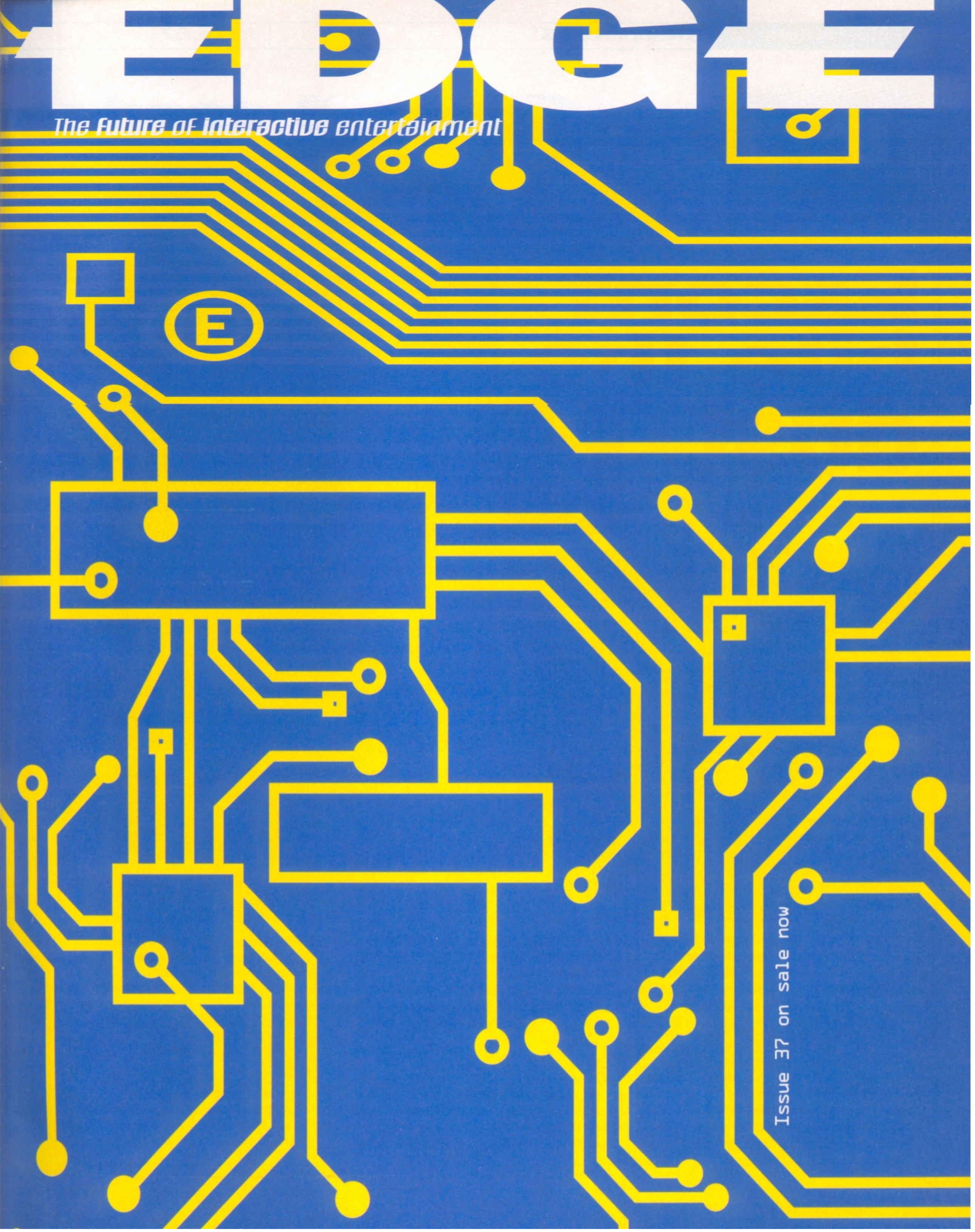
Don't delay, call our **Subscription Hotline** on ☎ **01225 822511** for details.

Dodgy disk?

To avoid errors when installing to floppies, ensure that your destination disks are of high quality. If an error occurs, try re-booting and using a different spare disk – most errors are caused by faulty destination disks.

If you are certain your Coverdisk is faulty, return it, along with an S.A.E. and two 26p stamps, to the address below. Please do not send faulty disks to the *AS* offices. If your disk is found to have a manufacturing error, the stamps will be returned with a replacement disk, but if the disk does not have a manufacturing error, the stamps will be used to send the original disk back.

Amiga Shopper Coverdisk
(insert the name of the disk),
TIB plc, TIB House,
11 Edward Street,
Bradford BD4 7BH


EDGE
The future of interactive entertainment
E
Issue 37 on sale now

News

There's a welcome burst of energy on the Amiga front this month, with news of great products and encouraging deals happening as you read this...

Escom bite the dust



The Escom stores have now been closed around the UK and customers are re-directed by notices. As are queries about the premises!

It seems that VIScorp signed the deal with Escom not a moment too soon, because Escom's spiral into bankruptcy publicly started on the 1st of July with the announcement of 227 redundancies following the closure of 65 of its 235 shops.

On the 4th, Escom filed for a Vergleich order – a process in Germany whereby debts can be restructured in order to fend off impending bankruptcy and similar in principle to an American Chapter 11 status that Amiga owners are so familiar with – and the trading of Escom shares were suspended on the DAX at only 4.63DM compared to a year's high of 22.50DM.

Florine Radulovic, VIScorp's spokesperson, said that the bankruptcy would not affect the deal signed by William Buck and Helmut Jost on the June 21st, except for a possible delay in completion. She advised the Amiga faithful to "just hang in there" and promised that it was business as usual.

Some might say that the Amiga has been a curse to any company that has owned it to date, but industry insiders blame Escom's fall on an overly aggressive expansion policy coupled with the fall in PC prices over the last year or so.

Still, there is another bright spot about the failure of Escom. It is rumoured that the Anglo Corporation, the people behind the Silica rescue, are interested in some – or all – of the Escom shops, and given their strong relationship with Silica and Silica's with the Amiga, perhaps shoppers this Christmas will be offered an alternative to a PC or Playstation.

VIScorp to sign deal with Emerson

It seems that the Amiga, or at least, Amiga-based products, are now going from strength to strength.

In addition to VIScorp signing the rights to the Amiga from Escom, they have also signed a letter of intent to agree a deal with American electronics giant Emerson Radio Corp. for exclusive distribution and retail sales rights to the Amiga-based UITI and UITI-TV (or smart TV, a TV set with the UITI built into it).

Emerson, who are major suppliers to some of America's largest chain stores like Wal-Mart, Target and Kmart, believe that their brand name, combined with the innovative nature of the product means that these big stores will be looking forward to bringing interactive TV products to a much wider audience than VIScorp alone could do.

The UITI will also act as a speaker phone, offer fax send and receive, CallerID and phone book services and will come with a series of in-ROM interactive multimedia games in order to provide greater value to the whole family. It remains to be seen just how big a ROM these gizmos will be fitted with.

phase 5 go 3D

Phase 5 have announced the successor to the already fast CyberVision64 retargetable graphics card. Imaginatively called the CyberVision64/3D, the new card should be available at some time later this year.

Unlike the original CyberVision, the new card works in Zorro II slots in addition to Zorro III and is based on the new ViRGE graphics chip from reknowned chipset designers S3. The ViRGE chip (Video and Rendering Graphics Engine)is able to perform real-time 3D functions in the hardware such as bi- and tri-linear texture filtering, perspective correction, depth cueing and fogging and is compliant with the current 3D standards on the PC, meaning that a version of LightWave could be written for CyberVision-equipped Amiga with OpenGL. In addition, phase 5 are also writing their own 3D library to allow software authors to reduce development time and expense.

The new board will have a feature connector on the card, much as the original CyberVision did, but phase 5 promise that an MPEG decoder module will swiftly become a reality for CyberVision64/3D owners and will allow full-size playback of video and audio on custom screens or even in Workbench windows.

Another add-on promised by the German developer is a monitor switcher with scan doubler that will fit on to the board giving A4000 owners an all-in-one solution to the problem of monitor bandwidth with a graphics card.

As previously stated, phase 5 hope to have the board ready at a price of 449DM for a 2Mb board (roughly £240 retail) and 599DM for a 4Mb board (roughly £325). They anticipate launching the MPEG module at the same time for 349DM (roughly £190). The scan doubler/monitor switcher will cost 149DM (roughly £80) and special discounts will be available to Power Up developers on all these products.

phase 5 have also told us that since S3 no longer support the expansion bus for the Trio64 used on the original CyberVision64, owners of that board can upgrade to the new CyberVision64/3D together with the MPEG module for just 499DM (or just £270).

Will the CyberVision 64/3D usher in a renaissance for Amiga graphics power?

Knight to the rescue

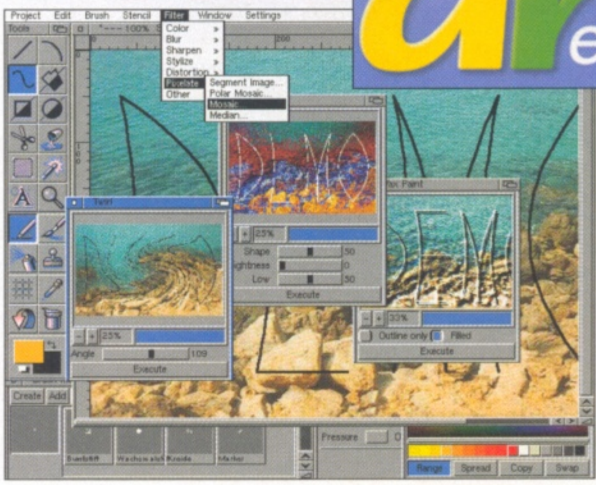
phase 5's distributor, White Knight, have also finalised a deal with MacroSystems Germany to give them exclusivity on the company's respected and powerful range of video-related add-ons for the Amiga. The deal will also mean that White Knight will be able to offer UK support for MacroSystem's products including software upgrades, hardware trade-ups and replacement of warranty failures.

Any customers who have yet to send in their registration cards for MacroSystem products should contact White Knight to find out what they should do. However, people who have already registered with the Witten-based MacroSystem will find that their registration details have already been passed on to White Knight.

For more information on this, or the new RTG graphics cards, you should call White Knight Technology on ☎ 01920 822321.

Art effects





It looks good, it works well, and by golly...

Haage and Partners, the German company responsible for Storm C, the splendid C compiler that can generate 060 code, are also about to launch ArtEffect on to an unsuspecting public.

Their inspiration, they say, comes not from traditional Amiga art programs, but from the likes of Adobe Photoshop and Painter on the Mac and PC, and with realtime previews of effects, brush palettes, context-sensitive option requesters and the like, it looks like Photogenics has a competitor.

ArtEffect has over 30 built-in effects and works with a plug-in system not dissimilar to Adobe's premier product, to allow for unlimited third party expansion. In addition to this, ArtEffect also has Light Table and Magic Wand tools for easier editing of 24-bit images and works in several different colour models including the traditional RGB and HSV modes.

The program works on any Amiga with Workbench 3.0 or higher and a hard drive, with a minimum of 2Mb RAM (although they recommend at least 4-8Mb). AGA and CyberGraphics users will get the benefit of true – or near-true – colour operating modes.

ArtEffect's German retail price will be set at 299DM (which roughly works out as a UK retail price of £160), but as yet, Haage and Partners have no UK distribution for either ArtEffect or Storm C. Anyone interested in further details on the package, or distribution deals should contact Haage & Partners on: +49 6007 930050, fax them on: +49 6007 7543, or e-mail them at: 100654.3133@compuserve.com.

Titbits

Olympic Amiga

In a slightly vague press release sent to us this month from VIScorp we have the following news:

"The 1996 Summer Olympic Games provides a unique opportunity for the Amiga to demonstrate its worldwide appeal, especially among news and media professionals from Europe and the Americas.

"Several US-based Amiga companies have joined forces to provide computer support to the press agencies attending the Games. A series of high-end Amigas are being placed at the heart of the media editing room for use as an on-site editing tool for video footage taken by various reporters and media producers. The Amiga will be getting some positive media coverage and a chance to demonstrate it's prowess handling complex broadcast and video graphics.

"Special thanks are extended to Keith Cagle, of Virtual Reality Productions, who organized the event space.

"VIScorp would like to thank the Amiga community for its support in this effort, especially the following companies for their contribution:

"Virtual Reality Productions, Keith Cagle, QuickPak, Dave Zembecki, New Tek, Bob Hoffman & Daneta Colbach, Anti-Gravity Products, June Lavenberg, DPS, Micropace, Bob Wolter"

We don't at the moment know exactly what role the Amigas are playing in the media editing room, although the computer simulations of the gymnasts tumbling look like a bit of a LightWave showcase, but rest assured, as soon as we do, we'll tell you.

Gilles jilted

In the constant restructuring of Amiga Technologies owing to Escom's fall and VIScorp's buyout, the newest victim is Gilles Bourdin, press relations officer for AT. Since VIScorp appointed Eric Laffont in France as their European PR man, Gilles' tenure was guaranteed to be short, but he left the company saying he felt it was in good hands with Eric.

HiSoft raise a few IBrowse

The Amiga's most fully featured Web browser, IBrowse, has been released in its first fully-commercial version.

IBrowse is now available from HiSoft for just £29.95 and requires 3Mb free memory, 3.5Mb hard disk space and Workbench 3 or later.

HiSoft are also launching a TCP/IP Internet connection for your Amiga that doesn't take a rocket scientist to configure and use.

Everybody who uses the Internet must communicate with it via a program called a TCP/IP stack, that understands the protocol used on the Net and all the complications that go with it.

Previously, these programs have been a nightmare to set up on the Amiga, but now Oregon Research and HiSoft have re-written the rules and produced an easy-to-use package which is fully configurable and comes with a comprehensive, easy-to-read manual. All you have to do with TermiteTCP is call an Internet Service Provider (ISP) and obtain an account; then enter your ISP into TermiteTCP and click on Connect – and that's it!

For the technically-minded, TermiteTCP supports PPP directly, includes GUI telnet and FTP clients (more in the pipeline), provides programmer's information for third-party products, has a patch library to enable AmiTCP applications to work and supports high-speed serial cards (such as the Surf Squirrel).

HiSoft are selling TermiteTCP for £59.95 or together with IBrowse and Net&Web for £89.95. Contact HiSoft on ☎ 0500 223660.

Fully-featured

Some of the features that make IBrowse a w-w-w well wicked web browser (!) are:

- **HTML 1, 2 and 3 support, cached pages (instant access to previously-viewed pages)**
- **DataType support allowing viewing of animations movies, pictures, and so on**
- **Web site hotlist**
- **History list for each session**
- **FTP plug-in for easy downloading**
- **Support for simple e-mail from any Web page with an e-mail link**
- **Easy to understand manual**
- **Superb user interface taking full advantage of WB 3, intuitive, drag-'n'-drop selection and most things are user-configurable**

IDEK'S VISION FOR THE FUTURE



If you've just gone and bought a new graphics card, or you've decided that that old 1950 just isn't good enough for your A3000 any more, then Idek have a new monitor for you to have a look at.

Their new Vision Master Multimedia 17in monitor should be up to their normal rigorous standards for monitor design, but will also include speakers in the bezel of the monitor for excellent sound as well as vision. The amplifier that Idek are using goes under the name of the 'Spatializer' and promises pseudo 3D sound for those really jumpy game experiences. Not that Shopper readers ever play games, of course.

On a more serious note the new Vision Master can handle a 1600 x 1200 resolution at 69Hz refresh and 1280 x 1024 at 80Hz, offering very good value for money at a price of £599 + VAT. You can contact Idek on ☎ 01438 745482.

Nice one, Squirrel

HiSoft Systems have also released the long-awaited Squirrel MPEG decoder (now known simply as the SMD-100).

The SMD-100 is state-of-the-art electronics that enables you to use any compatible SCSI CD-ROM player to play VideoCDs and similar MPEG streams on your TV or monitor and listen through your hi-fi.

Offering high quality playback of VideoCD 1.1, 2.0, Karaoke CD 1.0, OM-1 and CD-I Green Book CD-ROMs on any suitable display device (PAL or NTSC), the SMD-100 is perfect for home cinema viewing or demonstration via custom-produced VideoCDs.

Simply connect a SCSI CD-ROM to one of the two SCSI connectors, plug your display into the 21-pin Euro/Scart connector, attach headphones/amplifier to the stereo phono outputs and then control your viewing with the supplied infra-red remote control. You'll be watching and listening to the highest quality MPEG movies around and, in this case, seeing really is believing.

Future developments will include software to allow MPEG streams to be played from your Amiga, fully genlocked to your Amiga's output, text/graphics overlaying and more. The SMD100 will cost £199.95 and just needs a SCSI CD-ROM, it doesn't even need your Amiga to be attached. Contact HiSoft on ☎ 0500 223660.

Caught up in the Net

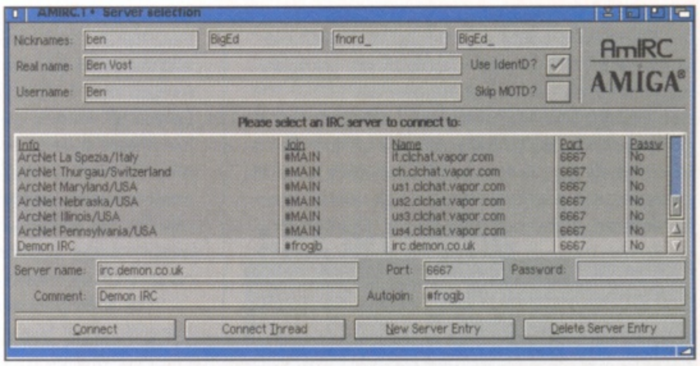
What's the Net got to offer Amiga users? ***Ben Vost*** *checks out the choices for software, service providers and browsers, and takes you on a tour of the best sites in town…*

The Net has been the fastest changing aspect of computing in recent years. Everyone's getting involved in the World Wide Web – from the smallest of businesses to the biggest of corporate giants – they've all got a site which sits proudly on their letterheads alongside address, telephone and fax details.

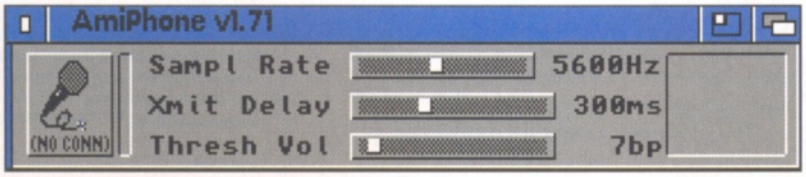
And nowhere is the Internet more widely exposed than in the world of media. How many television programmes extol the virtues of CD-ROM drives or hard disks? None. And yet they all go on about just how amazing the Net is and how you just have to get it for your home. Then they warn that if you do, the Net has replaced video games as the villain of the electronic piece, and instead of becoming epileptic, your children will be exposed to pornography and all sorts of other evils.

Whatever arguments there are, there's no denying how useful and entertaining the Net can be, so over the next five pages, we aim to show you what's on offer to the Amiga user and how to make the most of it.

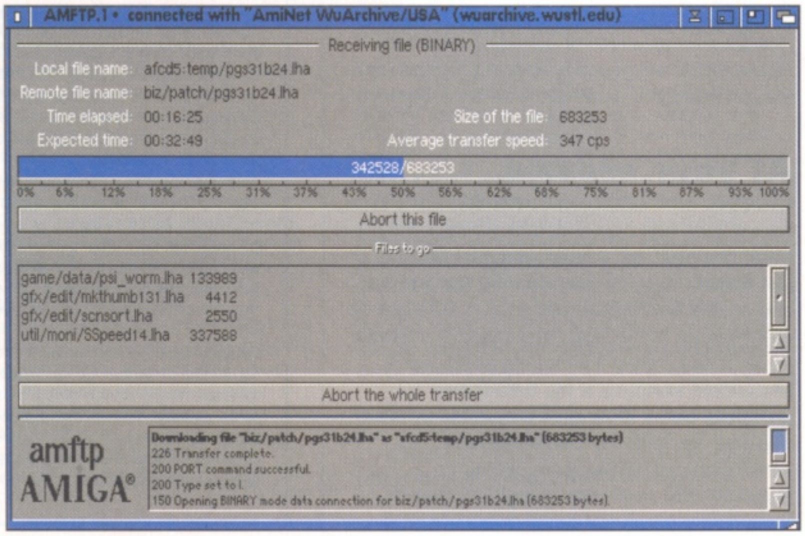
First, we'll look at the alternatives when it comes to getting the software to get you on-line. Then we'll look at who you should contact for Net provision; which ISPs support the Amiga, which think it's a kind of Vauxhall. Next up is the battle of the browsers, based solely on what is currently available on Aminet and other FTP sites, not on registered version or nearly functional beta versions. In this section we'll also look at other important Net programs – what you should use for FTP, e-mail, news, and so on. As if that wasn't enough we'll finally look at what is to come – NCs, set-top boxes, Java and VRML. So let's get going…



Caption to be written for here please wibble wibble away to your wibble hearts content



Caption to be written for here please wibble wibble away to your wibble hearts content

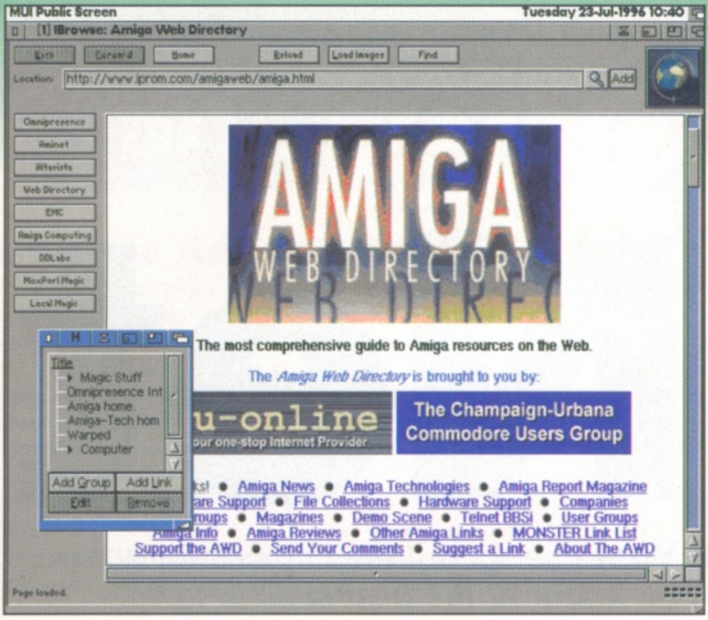


Soft options

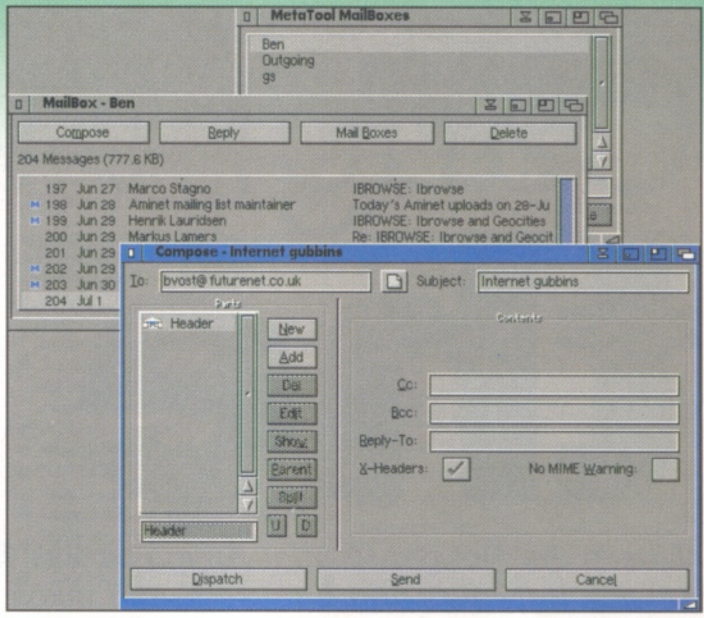
It's actually an interesting time to get on-line at the moment. PC owners are in such a majority that ISPs have been tumbling over themselves to offer easy-to-install and use Internet bundles for some time now, but until recently, if you didn't have an account with Demon, you had to find a copy of one version or another of AmiTCP/IP and try to cobble something together that would work.

Even with the D.I.S.A. newsgroup regulars putting together Amiga installers, it was still a process fraught with difficulties. But now there are several packages either already available or just around the next bend.

First on the scene came HiSoft's Net&Web, its status boosted by a fully registered copy of iBrowse, presently the best Amiga browser. Like most packages, it's in a constant state of evolution tightening up the installation process and adding more ISP details to make it easier for the user.

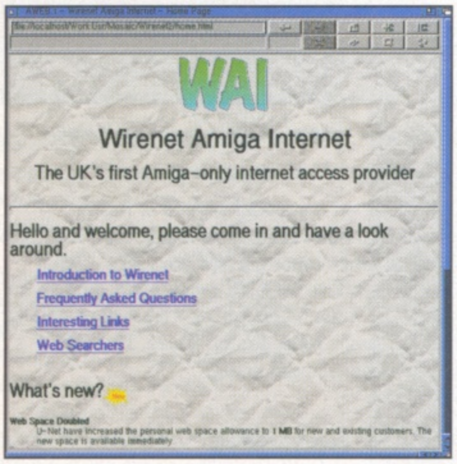


IBrowse, currently the most fully-featured web browser available for the Amiga, still needs more work.

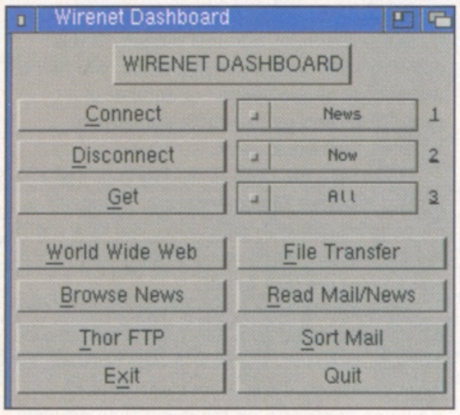


MetaTool is a splendid MIME mail package which is incredibly easy to set up and use. Its only problem is a lack of tracking over received mails.

The next product announced was Miami, a shareware TCP/IP stack that is designed solely for on-line use (it doesn't support SANA2 networking) and only consists of the core programs needed to get someone on-line. But it is extremely simple to use, consisting of just one preferences program into which all details can be entered. If you compare that to an Internet



Wirenet's home page, seen with the web browser they provide.



Wirenet's custom GUI frontend for AmiTCP hides away all the gubbins going on behind the scenes.

installation based around AmiTCP 3.0, probably still the most popular version of TCP/IP on the Amiga, with its dozens of configuration scripts (which all need to be edited by hand), anything like Miami is going to be an improvement. Since a full version of Miami isn't yet available, we can't tell you what has been left out to make it this easy to configure but Miami's simplicity might make it awkward to set your machine up as an FTP or Telnet server.

The third package will hopefully combine the ease of use of Miami with the completeness of Net&Web. NetConnect, from Active Software will use AmiTCP/IP (in a version that only supports dialup connections), but it will have its complexity reduced by having it all configured by a preferences program similar in concept to Miami. It, like Net&Web, will come with a complete suite of ancillary programs, some especially written for NetConnect. NetConnect also recognises 107 ISPs at last count, so if yours is in the list, then it will just be a matter of choosing the ISP and entering your domain name and user name, and so on.

The last package in the list may well be combined with the first because it is also released by HiSoft in this country. TermiteTCP is another easy-to-use GUI-based TCP/IP stack designed to be simple to configure like Miami. Again, this is very much a work in progress, so we can't give you much detail on the program.

At your service

Once you have some software to get you on-line (you will still need some sort of ordinary comms package to get you started with a lot of ISPs, just for entering your password for the first time and so on), who should you go for? On page 16 there is a list of ISPs that advertised in a recent issue of that groovy Internet magazine *.net*, a reasonable sampling of the best-known providers. Some ISPs were noticeable by their absence, for instance, Demon weren't advertising and neither were ZetNet or BogoMIP. We rang each of them and asked them if they supported Amiga owners, and the responses were discouraging for the most part.

However, there is a small select band of ISPs that can support Amiga owners, either directly or through a third party. Although Demon aren't on the list and support from Demon directly is poor and hard to get (the support lines are always engaged), there is a very active newsgroup devoted to Amiga-owning Demonites and their support, so you can usually get your questions answered (as long as you can actually get your newsreader to work and

Internet software essentials

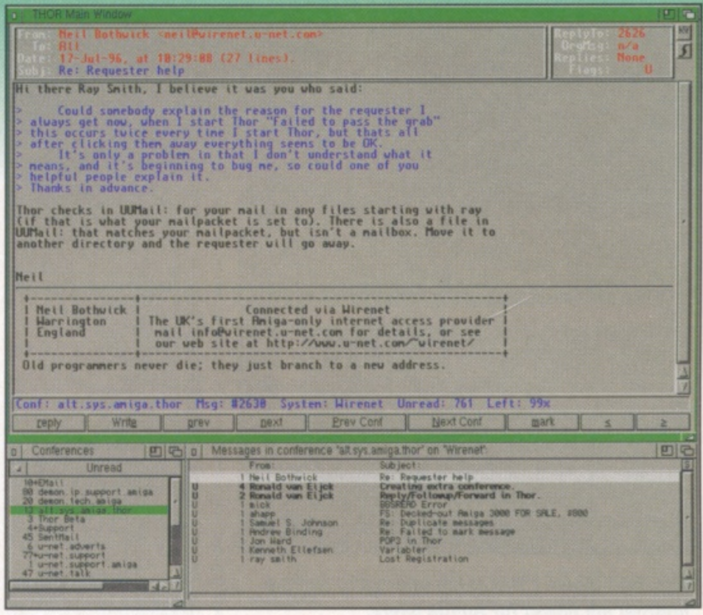
Amiga Surfin'
This is a newish book from Bookmark Publishing, an arm of HiSoft powered by Amiga journalist extraordinaire Jeff Walker. Unlike most books about the Net this is geared solely towards Amiga users, up to date and at only £6.99 won't cost you an arm and a leg. It's written in a clear style by Karl Jeacle and explains everything you need to know without going into unnecessary depth.
Verdict: Buy it.

AMFTP
Regarded by many (not only Amiga users) as the best FTP client for any platform. It comes with a long list of Aminet sites ready for you to log on to and acts as an ADT tool as well as a standard FTP tool. It can batch, download and decompress .Z files automatically and will even send out a ping to stop you from being thrown off an ftp server for dawdling.
Alternatives: MFTP is nice, but not so stable, DaFTP is stable but not so fully featured. All the others are a bit behind the times. You can also get a program that allows you to use DOpus 5 as an FTP client.
Verdict: the only time you should use any of the other FTP clients is to download this.

WEATHEREXPERIENCE
This one only turned up recently. It automatically downloads weather data from sites around the world and displays it in a window. The version we downloaded was a bit odd in that it was sure that the temperature in London was -1.1°C, while we



Futurenet looking pretty sparkly in Voyager, but not quite right. Voyager has problems with tables which can result in confused layouts.



Thor is the e-mail and news package of choice for Wirenet, it's certainly comprehensiv, but it isn't very intuitive to use.

you can send e-mail).

But not all Amiga-supporting ISPs are the same. For instance, Demon offer the user a node name, but no Web Space, whereas Wirenet do it the other way around. Is having a node name important? I have only one e-mail address at the moment: **ben@subway.demon.co.uk**, but with Demon's system there is no reason why I couldn't have **fiona@subway.demon.co.uk**, **help@subway.demon.co.uk**, **webmaster@subway.demon.co.uk** and as many more as I wanted. If I had an account with Wirenet, I would be forced to pay extra for each additional mailbox.

As for Web space, yes, it is nice to get something for free and we'll talk about tools for creating Web pages in a mo, but what's your idea? If you are burning to publish on the Web, then an account with freebie Web space is probably worth your while, otherwise don't set too much store by free Web space. If you do want to publish you might think that only getting a meg (or even just half a meg) is a bit stingy, but really, it will be plenty for most users since text files hardly take any space and the graphics on Web sites are supposed to be small so that they download quickly.

Just browsing

There are several contenders for the crown of best Amiga Web browser, but if you don't like

were all perspiring in Bath.
Alternatives: It's one of a kind.
Verdict: Odd but groovy.

AmIRC
Another great bit of software from the guys who brought you AmFTP. AmIRC is an IRC client that is to say, a program which allows you to chat with users the world over on-line.
Alternatives: Grapevine is just as good as AmIRC, but since their interfaces match, a lot of people who have AmFTP tend to also go for AMIRC.
Verdict: IRC can be addictive, so make sure you do it at work...

MIAMI
The first publicly available easy TCP stack. Miami is written by Holger Kruse, well known for his other Amiga shareware like ReOrg and the PPP.device. If you haven't yet downloaded Demon's installer, or bought one of the commercial offerings, get Miami. Even if you have, still get Miami just to see how good it is.
Alternatives: Well, none yet, but NetConnect and TermiteTCP will give it a run for its money.
Verdict: Splendid. Just what an Amiga program should be: easy-to-use and comprehensive.

AMITCPHELPER
We've only included this because Ben Vost made us because he wrote it. Ben says: "I'm very pleased that it works well with Demon's DIS95, but it really needs updating to take account of new stuff like Miami."
Alternatives: None whatsoever. Well alright, there are several other GUI frontends for AmiTCP/IP floating around the Net.
Verdict: You should really download this and register it because Ben has a girlfriend and several hungry Amigas to feed.

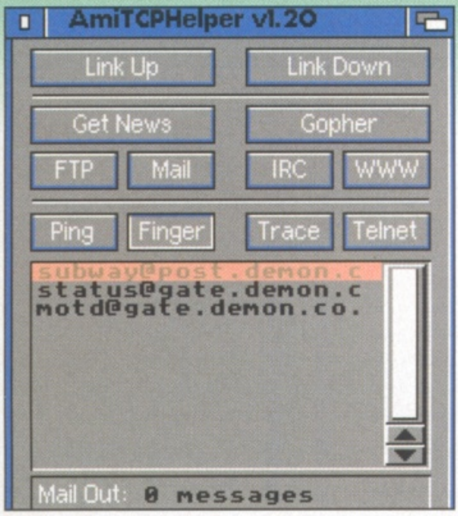
METATOOL
This is probably the best MIME mail package on the Amiga. It's easy to configure (it almost runs straight from the archive) although you should be able to edit the mailcap text file through preferences, rather than having to do it by hand. file
Alternatives: Voodoo. But Voodoo decodes pictures and sounds internally, which can sometimes be more of a pain than a boon.
Verdict: There are a lot of new mail packages in development, but you can't go wrong with MetaTool unless you need full mail tracking.

TIN
News reading on the Amiga is a bit long-winded and Tin is really tough to set up from scratch, but we reckon it is still the best news reader, notwithstanding its horrible interface.
Alternatives: Grn, Thor. Grn has a nice GadTools interface, but still isn't the friendliest package to configure, and Thor has always been tough in that respect (but thanks to Neil Bothwick it's getting easier), although it probably has the nicest interface of all three and can be used as an e-mail reader too..
Verdict: You'll look like a UNIX bod when you use Tin. Whether you think that's a good or bad thing is up to you.

ELM
Elm is a mail package. MIME decoding is up to a separate program which has to be installed correctly to function, and it has a text-only spartan interface. However, if you want to know if you have logged and replied to a piece of e-mail, Elm is the best at tracking these features. It's also the best for a multi-user AmiTCP setup.
Alternatives: In the UNIX mailer kind of category, Pine stands out as a competitor.
Verdict: Ben's been using it happily for three years – isn't that enough?

AMIPHONE
AmiPhone is a realtime (well, nearly) internet phone program that only requires some sort of sampler to work (note to VIScorp: an 8-bit A/D converter costs very little these days. How about adding built-in sampling capabilities to the next Amigas?
Alternatives: Use the phone?
Verdict: It's tiny, it's neat, it's unique.

NEWSAGENT
NewsAgent is a program that allows you to browse news topics on-line, collect them as a batch and download them all at once so that they may be read at your leisure in your newsreader. The advantage to this is that you can really raise the signal to noise ratio in the groups you attend. The downside is that you have to be on-line to pick through the subjects you are interested in.
Alternatives: Batch downloading using NNTPTransfer.
Verdict: Extremely handy, especially if you are looking for a particular bit of info.



Aah, isn't it cute? This is my attempt at making Internet life easier for Amiga users.

MUI, you'll only find a couple that meet your requirements, namely ALynx – a text-based browser – and AWeb. ALynx isn't really in the running. OK, it's fast, but it's also text-only, being based in a Shell window as it is – hardly what you got on to the Web for.

What we need are the browsers that come as close as possible to the bloated monstrosity that is NetScape, after all, most of the Web pages on the WWW rely on certain NetScape's features like tables, forms, frames and Java. Now, while the Amiga doesn't yet have a Java interpreter (although several people are supposed to be creating one), most of its Web browsers are capable of a few of the features that NetScape introduced to HTML like background images and tables.

So what Web browsers are out there? Oldest is AMosaic. It doesn't support many of the modern tags, but it is fairly stable and is best used for downloading new versions of your other Web browsers when they expire. AMosaic is no longer being developed since part of the crew who put it together are now responsible for iBrowse. iBrowse is one the best of the Web browsers – it handles tables, forms, multiple connections and the registered version also handles ftp, telnet and mailto:, as well as multiple browser windows.

Voyager development seems to have been quiet of late, but the version that's on their Web site (v1.0) is splendid. Although it doesn't support quite as many features as iBrowse, it is faster and gives you ftp, mailto: and Telnet for free. Voyager also has rudimentary newsgroup support allowing for on-line browsing, but it doesn't automatically decode binaries for in-line presentation. The reason that Voyager hasn't been updated since May is that Oliver Wagner and crew are busy working on V-NG, or Voyager – Next Generation, which is expected to handle frames and even more HTML3 and NHTML tags.

Then there's AWeb. Because it has now 'gone commercial' like iBrowse, the latest version available for free is 1.2, but that doesn't support many of the tags that make pages look

Internet Service Providers

ISP Name	Phone number	Result
Global Internet	0181 957 1003	No
CompuServe	0800 000200	They do supply some software for the Amiga, but weren't sure they could offer support
Premier	0181 213 1710	They'll give you an account, but don't expect support
Sonnet	0181 664 6000	No
Enterprise	0800 269146	Yes
Pipex Dial	0500 474739	See above!
i-way	01734 580058	i-way are a strictly local operation (for the Reading/Oxford area) and while they don't have a full-time member of staff for Amiga support, there is a guy who hangs around the office who might be able to help
Direct Connection	0181 297 2200	Yes but no tech support or software
U-NET	01925 633144	U-Net themselves don't support the Amiga, but they know a man who can and pass all Amiga enquiries onto Neil Bothwick at Wirenet (qv.)
Netcom	0800 973001	No
Abel	0131 445 5555	What Abel do is offer a trial period to see if your software works with their servers. If so, carry on, if not, money back.
Prestel On-line	0990 223300	They'll give you an account, but don't expect support
NetDirect	0171 732 3000	No
Wirenet	01925 791 716	Yes!

Interview with the Wire

Neil Bothwick is the man at the pointy end of Wirenet, the UK's first and only dedicated Amiga Internet service provider. He approached U-Net last year and proposed his service in order to tap into the large Amiga Internet market previously only catered for by Demon.

Wirenet offers an easy installation pack that doesn't rely on the user having an enormous amount of memory or hard drive space, which means that it doesn't use MUI. Neil has been an Amiga owner since the 1.2 A500 and owned a C64 and 128D before that, so he knows what he's doing.

AS: How did you get involved with U-Net?

NB: I wanted to contact various providers about Amiga support and so I mailed most of the providers listed in Internet magazine and got disinterested responses. U-Net were genuinely interested, although they weren't that keen on my original idea of providing them with an installer and offering third party support, but we discussed it and came up with the service reseller idea and that's how Wirenet was born.

AS: An if you have an account with WireNet it basically means that you have an account with U-Net, right?

NB: Yes, that's right. U-Net are, in my opinion, one of the providers that offer the best service, both in terms of their modem to user ratio and their willingness to add facilities and experiment.

AS: The biggest problem at the moment with Wirenet is that it is only available on an annual subscription. That's a lot of money to pay out in one go if you just want to test the water. Will a monthly subscription be made available?

NB: This is the problem. Basically the Amiga market is a domestic market and people in a domestic market want to pay on a monthly basis, even if it works out more expensive, because they are getting the service they want conveniently. The difference is substantial – if you pay annually, it works out that you only pay for about eight months, but that's not the point.

AS: What would be your ideal Internet set up?

NB: The optimum Amiga set up would have to be an A4000 with an 060 card together with an ISDN connection. Very nice if you can afford it since BT charge you £400 to install ISDN.

AS: How would you change the Amiga to make it better for Internet use?

NB: Well basically, it needs more power. To be perfectly honest the Amiga is very out of date. The A4000 was launched in December 1992 and all that's really changed since then is a bigger hard drive as standard and a faster processor. It was launched at a time when the 486 was pretty new in the PC world and look where they are now. People need more and more power to cope with the software that's being developed. It's just a shame that Amiga development has been stalled for so long – over two years now – and the uncertainty over whether Amigas are going to be in production again means that hardware developers are wary of pumping research and development into new projects.



Miami must have had idiots for beta testers, because it really is idiot proof. This window represents the sum total of Miami – no cryptically named drawers within drawers containing esoteric text files here.

good, such as centring of text and images, backgrounds and picture alignment. This means that it doesn't look half as nice as Voyager and iBrowse on screen, but on the other hand, it is extremely fast, faster even than Voyager, thanks mainly to the lack of MUI.

Putting it all together

OK. So you have your Web browser and you really want to put together your own home page, but you haven't the foggiest about how to go about it. You've looked at some existing pages using the "Source..." menu item, but it's all a bit gibberish to you.

All is not lost. You can use several different packages to help you create HTML without having to get your hands dirty, but perhaps the latest is the HTML export module for the latest version of Final Writer. Like most automated HTML exporters on any platform, the computer has a hard time trying to match your word processor version with the Web version, but at least it gives you a headstart.

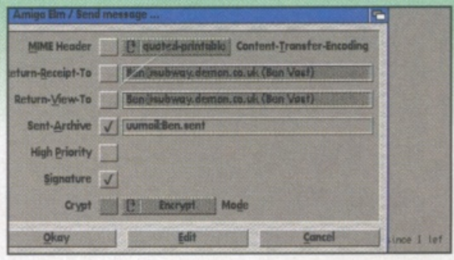
If you really want to make a Web page, and you don't want it to be the simplest, most boring page on the Web, then you will have to get stuck into the HTML using a text editor, but it really isn't that hard. Borrow ideas (and source) directly from other pages and incorporate them into your own pages. Tables are a great way of making sure that your page will look the same on any browser (well, any browser that supports tables, that is).

But a Web browser isn't the be all and end all of internet software, not even if it does have news and e-mail built-in. It is very likely that you'll need a dedicated e-mail package, news program and FTP client. Our picks of the bunch are scattered around these pages, but don't just take our word for it, take a look at the alternatives too.

And there's more...

Finally, there's a lot more to come on the Net. PC and Mac owners have already experienced the wonder that is overseas phone calls through your Internet provider on a local call. RealAudio allows for CD shop Web sites where you can hear snippets as you download them rather than having to wait for the whole file and VRML (pronounced Vermal) gives a Web browser a third dimension.

With VRML you can walk through virtual shopping malls (but without getting tired feet) and view 3D models directly. ShockWave is another plug-in that gives your Web browser



Elm's mailer can be used on its own for a quick and easy way of just sending email.

animation and interaction facilities based on a program on the PC and Mac called Director.

Lastly, the latest biggie is Java, a platform-independent, interpreted high level language which can be used for anything from scrolling text on your Website to complex database or even game add-ins.

Now, not all of these things are coming right away for the Amiga. For the Internet phone calls we have AmiPhone, there's a program called UnRealAudio that can be used to decode certain RealAudio audio streams, but, as far as we know, there is currently no VRML browser, ShockWave plug-in or Java interpreter in development for the Amiga. The Java one is problematic because a commercial developer has to pay a large license fee to be able to port Java to another platform, ShockWave is unlikely to come to our platform and while a VRML add-on is feasible, the Amiga's standard graphics chipset really isn't up to moving loads of polygons around in real time.

However, and it's a big however, if VIScorp do fulfil their promise of creating an Amiga set-top box designed to integrate televisions and the Internet, then things start looking great for everything we've just mentioned. And where VIScorp's little UITI leads, the Amiga will follow. The Amiga already has the best FTP client seen on any platform in AmFTP and AmIRC is pretty hard to beat too. Maybe this time next year people will be buying Amigas, rather than PCs, to get on the Net. ■

Essential Web Sites

The Amiga is quite well-represented in terms of web sites. Here are a few of the best for you to take a look at, if you haven't already...

Searchers – When you need to find something, use one of these search facilities:		
Excite	www.excite.com	Good general web and usenetsearcher
Yahoo	www.yahoo.com	The grandaddy of Web search engines, this one is hand-indexed, so the selection is smaller, but you're more likely to get a result you want
vsl	www.shareware.com	This search engine is for software. It can find practically any bit of software that's on the net, including Amiga stuff
Amiga focussed – These sites all concentrate solely on the Amiga:		
Web Directory	www.iprom.com/	The biggest and best Amiga site, you amigaweb/amiga.htmlcan go to almost anywhere in the Amiga world from this site. This is the UK mirror of the original US site.
VIScorp	www.vistv.com	The new home of the Amiga doesn't have much by way of Amiga entertainment, but you should at least know where it is.
General – Those other sites that should be on your hotlist		
Futurenet	www.futurenet.co.uk	One of the UK's busiest Web sites,Futurenet has sections for the Amiga and much more besides.
Internet Movie Database	www.leo.org/Movies/	The biggest guide to every single movie ever in the entire history of the universe...

X-DVE2.5

Although into its second edition, X-DVE is a digital video effects package that has received little coverage in UK press. **David Taylor** *changes this with a well deserved in-depth review.*

The standard animation format used on the Amiga is far too slow for most professional uses and has far too many limitations for the likes of video titling. But in recent years there have been a few ways to get around this, the most popular being through software like ClariSSA, the latest version of which is reviewed this issue (see page 24). X-DVE is a similar package, offering various animation options.

Now for something completely different...

When you make an animation in a standard paint package, you approach the idea by sorting out every change on every single frame as you go along, or at least by making fixed changes to the frames. But X-DVE approaches the idea of animation from a different angle. Animations are made up from different objects, which can be images, text, animation brushes, and so on.

Each object is controlled independently so that you can make changes to any object at any time, without affecting the rest of the animation in any way. In a standard animation, once you've applied a change, you'll have to either recreate the whole animation from scratch before the change or keep backups of every change you make. Controlling objects in the X-DVE manner means that you build up the animation through creating a script.

When you first start X-DVE, you need to actually begin a project because although it is all blank, parameters – like the screen mode – need to be set. Then it's simple to start creating a professional animation.

First you have to work out which type of object you want to use. You can load and view any of the object types available and you can also make certain changes to them. Any object can have its attributes changes to set it as transparent or solid or with or without a background, and you can also add outlines of various thicknesses to an object and bevel text.

'Normal' animations

As with other packages of this type, it is really intended to be used for creating video title sequences, but it does cater for 'normal' animations in that it's simple to move objects across and around the screen. When you combine moving with an object that is an animation brush, you can get a very smooth impression of realistic movement – whether that's walking a person across the screen or bouncing a ball around it.

To do something like that, all you need to do is select the animation object type and insert it. You then choose the number of frames from the start of the animation that you want the object to begin its move from, and then the number of frames that you want to make the move over. The number of frames for an object is split into three,: in, pause and out. You can use any or all of these phases and most of the time you'll use all of them on a single object. The In phase governs how many frames X-DVE will use to bring the object in, the pause phase how long it will be held before the out phase which dictates how many frames will be used to remove the object. When relevant to the effects, you can select where the object is placed at the beginning of its run, where it is held and where it will move out to.

Obviously, if you use an animation brush, although the object will be held in the pause phase, it will still run the animation brush part. So, if you wanted to get a man to walk on to the screen, stand still, and then walk off, you'd do this with three separate objects. The first would be him moving it using the movement of an animation object through the in phase. The second would be a frame from the animation with him held there for a pause and the third would be back to the animation for an out phase. Of course, if you simply wanted him to walk across the screen, you could do this by using just a single object and using just the in phase and selecting the start position and the pause position. Even though the pause position may be off the side of the screen and the object won't be held there at all because of an empty pause frame number, you can use it to show where the object must move to. When you are positioning the object with the mouse, you can also use a combination key and mouse to rotate the object too.

XFA anim format

Since you have to draw the animation objects in other paint packages, you may wonder what the point of using X-DVE is. After all, even though paint packages don't hold off the changes, they can be used to create animation like this quite quickly so it wouldn't be too much of a hassle to start over. But X-DVE has its own XFA format for animation which offers compression and silky smooth playback – a standalone player is supplied. You don't have to use this method and you can opt to create IFF frames if you prefer. There is even a separate utility provided which can convert both ways between XFA and IFF frames.

The only problem with rendering the animation as XFA, as opposed to IFF, frames is that the IFF frames can be generated one at a time and saved to disk so that it operates on a machine with lowish memory. XFA animations

Selected frames from a long demo script showing various effects and bad spelling .





The program renders the script object by object.



This new attributes requester allows you to customise an object.



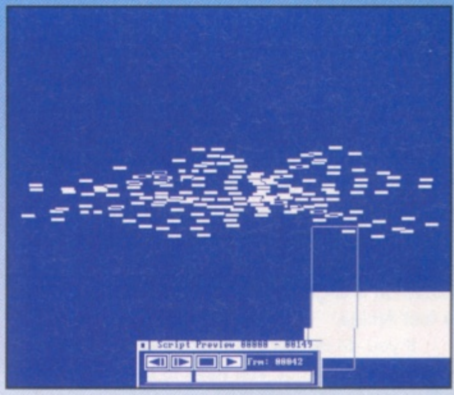
Using the '\' separator, you can now have multi-line text objects which can be justified left,



The Wind effects are always popular because they look so good!



The new Warp effects add moving with sense of 3D perspective.



The preview screen offers the essential wireframe impression of your animation.



There is an information window which offers details on both the system and the animation.



The Show frames window makes it easy to see when objects interact in an script.

are generated entirely in memory and then saved to disk at the end, which isn't too much of a problem because you can actually do pretty large and complex animations on even a 6Mb A1200. But if you push it too far with large objects doing complex moves, you will run out of RAM. Unfortunately, virtual memory doesn't seem to be supported. The only answer for big animations (that's ones with full-screen 256 colour hi-res pictures with effects) is to get enough RAM.

Video Effects

All this is getting a bit ahead of itself, because we haven't really talked about the main area of power for X-DVE. Because it is a package created with video titling effects in mind, there are three more types of effect other than the simple move object: Slide, Warp and Wind.

The slide effects are the typical slicing type effects where an object is split into layers which are then wrapped together or moved apart depending on the direction of the effect. In its simplest form this means the object is split into, say, a top half and a bottom half and the top will be moved off to the right while bottom goes off to the left. Thus your title can be brought on, or taken off, the screen. These types of effect are essentially simply a movement of different sections of the object.

The Warp effects are a whole new range of effects introduced in this version of X-DVE (all the other types of effects have also been extended). These can be used to fold objects on and off the screen so that you get a feeling of perspective because it does so as if it were turning in 3D.

The Wind effects section is the largest and offers the type of effect that the majority of people will want to play with most of all, if only because they make a title sequence look particularly flashy, very easily! These effects split the object into blocks, which can be either large so that less blocks are used, or very small so that the object seems to made of specks of dust. These blocks are then moved together in a number of gyrating ways to form the object. If you opt for smaller blocks you will get a smoother animation which looks more like a professional job, but it will require more memory, more animation frames to be able to complete convincingly and a lot more processor time. To save on memory, you can turn off Workbench in the program's preferences, but it might not be enough for especially large objects.

Getting it right

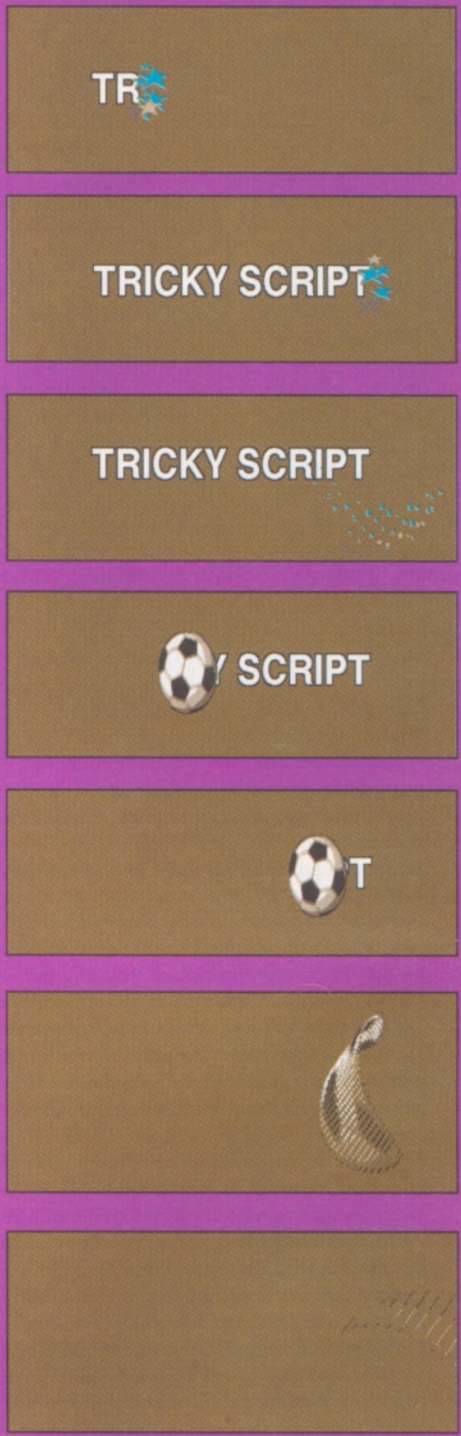
When you have set an object and the effects you want, you'll want some idea of how it looks. Thankfully, you don't have to render the whole animation in order to this. If you just want to look at the object you are working on, you can do this in the object screen and you will be shown a wireframe representation of the object. There are remote controls for playing the object and this was one area that has been really improved







A simple script that looks very effective, with the stars bringing the text in and then disappearing, and the football wiping the text off and then exploding off.



since the first version of this program . However, the Stop control seemed a little unresponsive and stopping the animation in order to quit it was difficult to do.

You can also see a preview of the whole animation script with all the objects on it. This feature is invaluable, saving you eons of time and allowing you to tweak an animation to perfection even before you render it for the first time.

When you do come to render the animation, you will see the program saying it is working on each effect individually rather than on the animation frame-by-frame. This seemed as if you should then, by rights, be able to make changes to any single object and then only have to re-render that object to change the animation. This, unfortunately, isn't the way it works. Although you can go back and change an object, it will render the whole animation again. Even though rendering is considerably faster thanks to processor specific libraries, you can still wait for hours on a large, complicated animation even on a fast Amiga.

If you do render the animation again after changing an object, you have to be sure to clear the animation from memory first. Otherwise, although the object may have the same name, the movements of the original XFA animation will remain and the object will appear twice in the animation – the first in the original position and the second in the new position. I can't decide whether this is a feature or a bug, but if it is the latter it is one easily avoided, but perhaps the animation should clear automatically when it is overwritten.

Easy but powerful

The interface has been kept as close to the original as possible so that users of version one will have no trouble using the program. It does mean that it might seem a little non-standard to new users, but it is easy to get to grips with, even if there are no menus. At least the palette has been brought it more into line with the Amiga standard.

You can have up to 100 independent objects and the animations can run up to 10,000 frames (that's 200 seconds at 50 frames/sec, that is a 3⅓ minute animation). The only aspect that might seem hard to keep track of is where objects enter animations and what phase they are in with respect to the timing of other objects. This is dealt with by a separate window which shows bar charts of each object with the different phases shown in different colours.

In order to give the program access to as wide a range of objects as possible, datatype support has been added. Machines that support these (OS3) can therefore load pictures of any sort. As the developers warn, because most datatypes are some form of PD, you may run into problems with datatypes crashing the machine, but most datatypes these days are reasonably stable. There are no datatypes supplied with the package (after all, they are not the work of ClassX), but if you don't have them you can obtain them all from Aminet.

Should you buy it?

It might seem that X-DVE is a poor relation to the new ClariSSA Pro, which has several new animation formats for even faster animation playback. I don't think so. Coming in at a fifth the price, X-DVE is cheap and affordable, yet offers the ability to create professional video titling. Its animation format is very smooth and ran big animations fine on my A1200/030. Sure, true professionals are going to get their money's worth out of ClariSSA, but home and mid-range users will find X-DVE a much better value for money product. What you have to decide is are the extra features of ClariSSA Pro worth £160 more to you?

This makes it seem like a big plug for the fact that UK sales are handled through us, but since I'm not on any commission (worst luck), believe me it's not. ClariSSA is an excellent product, well worth its Star Buy award, but it is very highly priced for many Amiga owners – it is aimed at a separate market.

X-DVE (which, incidentally, stands for eXtended Digital Video Effects generator) is produced by an Italian developer and had no UK distributor. For a limited time, therefore, you can obtain it through our mail order – see the page opposite. This is because a deal was made for version one to be included on the Coverdisk of sister magazine *Amiga Format* last month and the offer was a simple upgrade and so it has made sense to include the offer here rather than not review a good product, or do so and reveal that it was unavailable in the UK!

Subscribers to *AS* will also find that they can try out this new version of X-DVE for themselves this issue, because a demo is on the exclusive Subscribers' disk. ■

Added features

For those that have seen version 1, even if it was only recently on the Coverdisk of Amiga Format, here is a list of changes in version 2 (this doesn't include the whole program rewrite for speed increase or the new look):

- **Multi-line Text object with programmable spacing and alignment.**
- **Ability to load the first frame of an animation in a Brush object.**
- **New MultiBrush object to make X-DVE2 work with image sequences.**
- **Attributes like 3D, Bevel, Shadow, Outline, to apply to any object before its rendering.**
- **Object anti-aliasing to eliminate jagged contours.**
- **New 10 Slide effects (with the so long desired 'Carpet' and 'Melt' effects)**
- **New 40 effects family called 'Warp' which act as pre-programmed solid-state DVEs.**
- **3 New 'Wind' formulas with lots of variations, from a Galaxy-like effect, to a spray one.**
- **Single object or whole animation preview, controlled by a VCR-like control pad.**
- **Endless loop (good for spinning logos) or single shot animations.**
- **Render speed doubled for 3Ds, Warps and light sourced objects.**
- **1/16 of degree precision for angle computations (no more jumps with slow 3D rotations).**
- **Grater compression speed for XFA animations.**
- **Ability to render and show any frame of the animation.**
- **Better play speed for XFA animations under OS2.x**
- **Direct support of picture DataTypes (only under OS3.x)**

X-DVE 2.5

Price:	£39.99
Supplier:	ClassX (Future Mail Order)
Contact:	01225 822511

Verdict: 95% Star Buy

X-DVE 2.50

offer at an exclusive Amiga Shopper price...

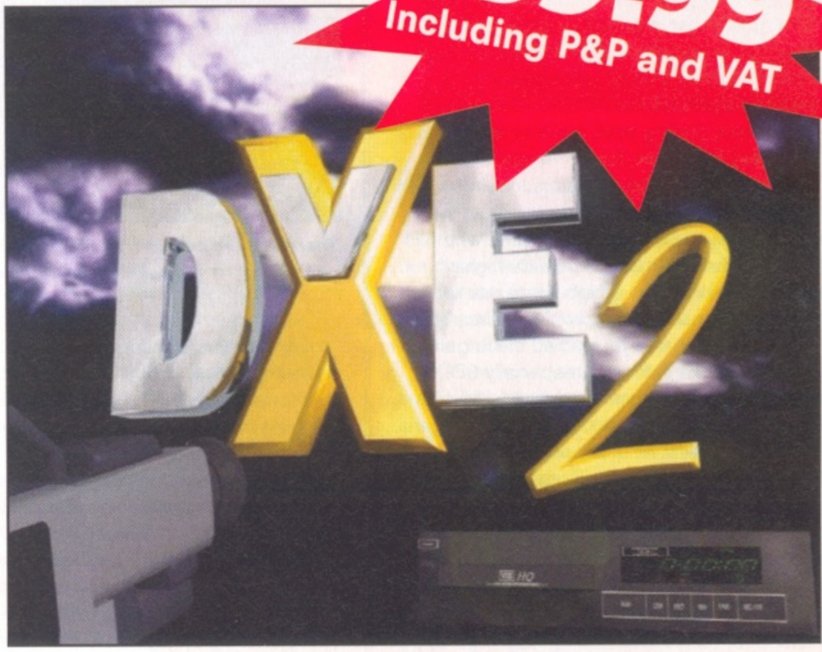
Now you've read the review, you'll understand why we've made sure that UK Amigans can get hold of it by making this limited offer available. Don't miss out on:

- **ARexx support**
- **Datatype support for images and animations**
- **Full light sourcing effects**
- **34 slide effects, 40 Warp effects**
- **Optimised code for maximum speed**

Minimum System requirements:
Workbench 2.0+ 1Mb Chip Ram 2Mb Fast Ram
Suggested Configuration:
A1200 + 68030 + FPU + 8Mb Fast Ram + HD

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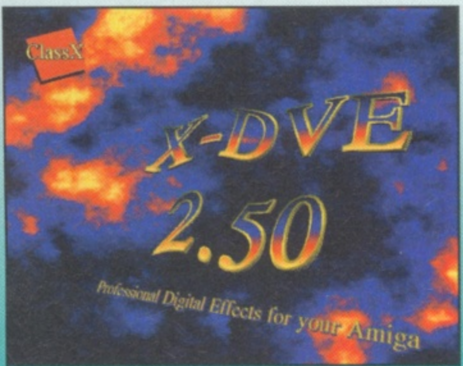


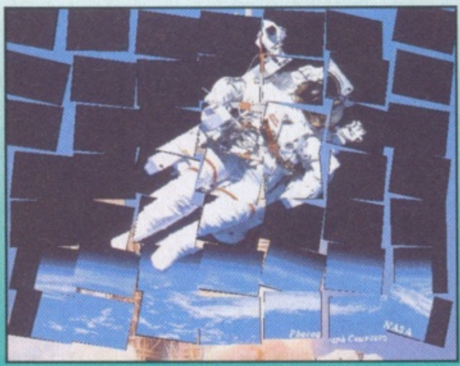
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ClariSSA Pro

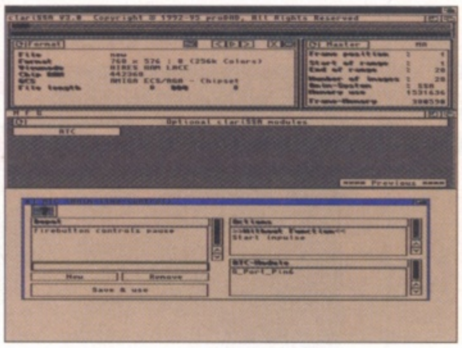
*ClariSSA is already an impressive animation program, so is it possible to make it that much better? The super smooth **Graeme Sandiford** gets his socks almost knocked off by this Pro version's powerful, practical and – more importantly – pretty, new features.*

There are not many computer systems that can match the Amiga's animation abilities, and certainly none that can do so at anywhere near the same price. It's not just in the creation department either, the Amiga is actually better at playing back animations than a lot of other more expensive systems.

However, playing back a colour animation is still no easy task, even for the Amiga, and animators can often be a little disappointed with the results they achieve. This is not often the case for most basic users, but anyone who has tried to produce animations that are highly detailed or that require a high frame rate are likely to have encountered problems already.

The trouble is that there is so much going on in the average animation, especially 3D-rendered ones. The computer has to update every changed pixel for every frame of an animation. At worst for a low-res animation (320x256) that could mean updating as many as 81920 pixels.

Although things are rarely that bad, it does give you an understanding of how much work your machine might have to do several times a second. Things are improved a great deal by animation formats like anim that record on the changes from one frame to another and employ compression algorithms.



Thanks to the program's modular design you can expect to see even more features soon.

An obvious, although extremely expensive, option is for you to buy one of DPS's PAR (Personal Animation Recorder) cards. They cost the best part of £1,000 and can only be fitted to a big box Amiga.

There are also details you can take into account when creating your animations. You can reduce the amount of fancy panning motions for your camera, avoid moving backgrounds and even reduce the resolution of your animation. However, despite taking these – and other – precautions, you will still need to buy more equipment if you want to achieve smooth and detailed animations.



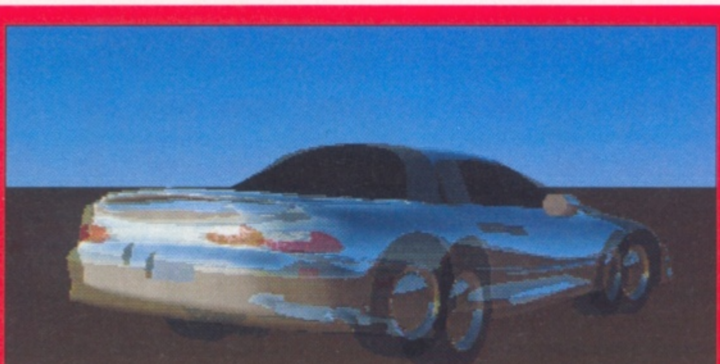
This animation is a piece of cake for ClariSSA – there's very little change from frame to frame.

Frame control

Of course, that was until ClariSSA arrived which provided a third option – software optimisation. And ClariSSA did more than simply improve the playback of animations, it also doubled as an animation editor by giving you extensive control over the frames in the animation. Now ClariSSA Pro has finally been translated to English (from German like Monument Designer).

Many people were impressed by the number of features in the original program, but ClariSSA Pro is even better and naturally, has many more features. Despite this, there are few differences between the interface of ClariSSA Pro and its previous versions. ClariSSA Pro's interface is built around a highly configurable window system. This enables you to have as many or as few windows open as you want. Where applicable, the windows have cycle-gadgets so that you can access several sets of tools from within the same window.

While this system has plenty of advantages (given features that need to be crammed in, it's possibly the only way it could work), it also has its disadvantages. You occasionally have to slog your way through a series of cycle-gadgets to get to the tool you're after. You can get around this through good use of the program's menus, but it can be difficult to know where to look.



ClariSSA's SSA format works by effectively halving the information in each frame.

Super Smooth

ClariSSA's biggest asset the SSA animation format, which stands for Super Smooth Animation and it's not without good reason. After an animation has been processed and then

New Features

- Multi-anim support
- SSAd animation format
- Fade effects
- Screen positioning
- BeZi Editor
- High-end SSA format
- Screen cropping
- Colour editing
- DDO-play animations
- FX window
- Modular design
- Depots
- Genlock effects
- Neptun genlock support
- Colour keying
- Background and Foreground anims
- Static Image animations
- Export single frames
- Effects Sequencer

saved in SSA format it will run about twice as fast and silkily smooth.

This is because each frame is effectively halved (every-other scanline is missed out) and played back quickly enough to convince the eye that it's seeing one image instead of two. Using this method it's possible achieve playback speeds of up to 50fps which is more than sufficient for most video work. Not satisfied with the results achieved with the SSA format, ProDAD decided to introduce high-end SSA. This new format is actually 80 per cent faster than ordinary SSA, which should solve the problems with halting frames that some people have experienced.

Direct from disk

Still not content with simply improving the speed of the SSA format ProDad have also introduced a format call SSAd. This new format can be used to playback animations directly from disk and, as you might expect, it's fast – faster than an anim5 played from RAM. This means that the length of the animations you can playback is limited by your available disk space rather than how much RAM you have. The program also has built-in virtual memory so that you can edit animations that would otherwise be too big to load in. As with Monument Designer, this doesn't require a machine with an MMU and will apparently work on 68000 processors. There's also no unpleasant results when using an 68060 processor.

Mix and match

Another important new feature is Multi-Anims. That's what the program calls its feature that enables it to mix and match animations of different formats and characteristics – different colour palettes, screen resolutions or offset positions. If you tried to do this with previous versions of the program, when it came to playing back the animation it would stop for a while to make the necessary adjustments. Not so with Multi-Anims – they switch smoothly from one format of an animation to another. This is especially useful if you are trying to combine animations from different sources such as video and raytraced or line art and video.

Those are the animation playback features, but ClariSSA Pro has even more to offer. It can also provide you with extensive information about your animation so that you can analyse it and know what will happen when it's played so that you can spot potential problem frames.

As well as providing in-depth and accurate information about an animation, the program offers precise control over the animation and you can add different special effects. If special effects do not interest you, a unique Bezier control system might. It can be used to control and optimise the performance of an animation by manipulating a Bezier curve. But the process can be confusing, and is best left to the experts who are trying to fine-tune their animations.

Special effects storage

ClariSSA special effects are stored in what the manual calls depots which are divided into the following groups; Fade-Effect, 2P-Movement, Colour-Effect, Clip-Effect, Keying, FX-Wipe, FX-Blend, FX-Fade as well as user-defined depots. The depots can be used to do anything from make a simple palette change or fade to clip-based effects and video-titling wipes. The depots are essentially a window that contains icons that can be dragged-and-dropped on to a section of an animation and you are prompted for the frames that are to be effected.

Other important features include palette manipulation, memory management, importing images straight from MacroSystem's Vlab cards, optimisation routines and tons of macros and ARexx commands. It's these last two features that will ensure the program's future because many of the program's new features have been added in this way. Hopefully as more people get to grips with this excellent package, we may see even more wonderful new add-on tools.



ClariSSA laughs in the face of hi-res animations with lots of action – ha! ha!

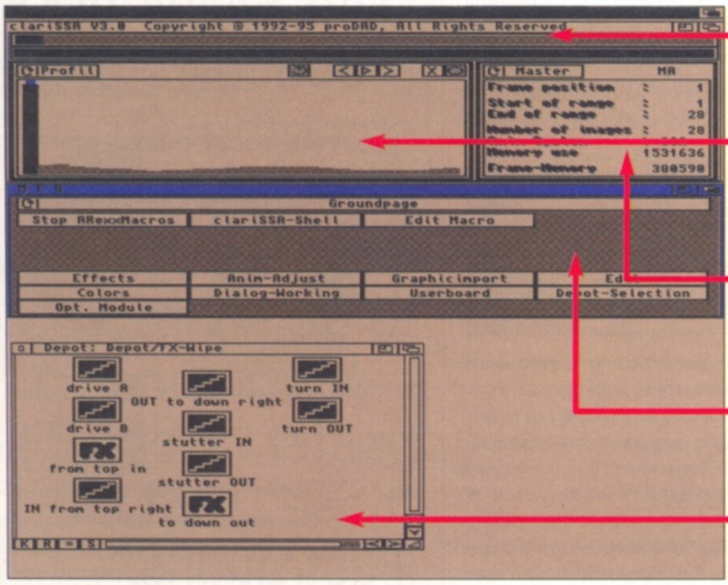


Even animations with twisting and turning camera angles aren't too much for ClariSSA to cope with.

Wish list

No product is perfect and there are a few features that ClariSSA Pro still lacks. Although it would be more or less pointless for the program to have support for saving in other animation formats, it would be good to be able to load in a greater variety of animation types. In a similar way, it would also be useful to have support for common image formats like JPEG.

Another wish-list feature is support for sound – it adds another dimension to animations and sound editing and sychronising features would be welcome. These short-comings don't stop this program from being one of the most important releases in a long while. ClariSSA Pro is impressive and should become an important part of most animator's software collection. ■



This bar enables you to move to a frame in the animation quickly and easily.

The Profile window provides you with an overview of your animation.

This window also shows information about an animation, but is more detailed.

This window can be used to open other tools and windows.

This is a depot and is used for storing special effects and the like.

ClariSSA Pro

Price:	£200
Supplier:	White Knight Technology
Contact:	01920 822321

Verdict: 91% Star Buy

Epson Stylus Colour 500 and Stylus Pro

Striving for perfection in a printout? **Larry Hickmott** *is. So he takes two new printers, a great number of graphics and an Amiga to see if he can achieve the ultimate in output. Here are the results...*

It isn't often that I get to review a printer on more than one type of computer, but this month, I have been asked by various magazines to review the new Epson Stylus Colour 500 on the PC and Macintosh as well as the Amiga. Having to do this is useful because it has given me an insight those of us on the Amiga rarely get – of how good or bad a printer is on a range of computers.

The Epson Stylus Colour 500 is the replacement for the Stylus II. To make this review a little spicier, I also asked Epson to send me a Stylus Pro A4, to see just what there was between the two to justify the extra cost of the Pro model. Before we get to the crunch point of how these printers work on the Amiga, here's a little background on the specifications of each printer on test.

Stylus 500

The Stylus 500 is very much the same as the old Stylus II. A lock on the paper guide has been added, but very little else has been done to make this unattractive printer more sexy.

A call to Epson in Hemel Hempstead and I was told that this new Stylus has some significant improvements over previous models, although keep in mind that most of these do not affect the Amiga owner. New inks which are more vibrant, more resistant to fading (untested) and water resistant will help the Amiga owner, but the enhancements (minors ones really) to the Macintosh and PC printer drivers will not.

The print mechanism looks like the one on the II model with the same number of nozzles putting the ink on to the paper, and similar looking cartridges holding the ink. An area that has been given some attention in the new model is the paper feed and, although I put through hundreds of sheets of the special coated paper without seeing a paper jam, when I changed to using normal 80gsm bond paper, I did have the odd spot of trouble, something I never have on my original Colour Stylus.

The crucial part of this review, though, is how well the 500 worked with the Amiga. Having just finished a review of the 500 on a Macintosh, using the printer on that machine provided no headaches and the quality for all but flat colours was very good indeed.

On the Amiga, however, I first had to look around for a printer driver because as we all know, the printer does not come with one. The



The A4 Stylus Pro is only a little better than the 500, but is significantly more expensive. Save your money for the A3 Pro XL which is a different kettle of fish altogether.



Although the new Stylus has only improved marginally over previous models, the 500 model is still great value and probably the best printer for an Amiga.



The print test used on the Amiga, similar to one I used on the PC and Macintosh with the same graphics, produced reasonable results but in no way reflected the quality of both Colour Styluses.

"The Stylus 500 produces stunningly smooth near **photographic** output, but still need to be improved so it can produce flat pastel colours like those used in illustrations."

first printer driver package I tried was Studio 2.11 and that drove the printer without any problems, even though the quality was not a match for that produced on the PC or Macintosh. I then switched to TurboPrint 4.1, and again, the printer worked fine even without a specialist driver for this model.

Comparing all the tests done on the PC, Macintosh and the Amiga, it was the Amiga which suffered the worst overall quality, but at least I was able to see that it wasn't the printer's fault. That said, the quality of photographs and coloured gradients on output from the Amiga are fine and only just behind that produced on other platforms. Where the printer suffered most on the Amiga was in printing a greyscale gradient which looked nothing like that produced on the PC.

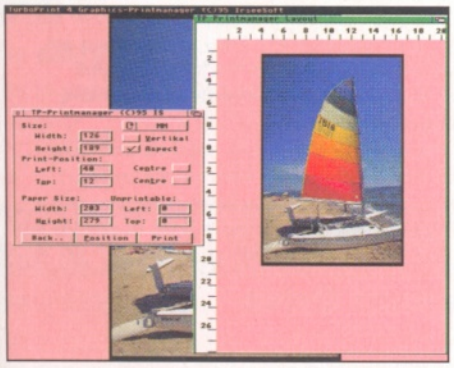
When printing black text on to a yellow background, I found the text bled into the yellow far more than it should, even on coated paper. This was the fault of the printer and not the Amiga. The quality of text on plain paper depended a lot on the type of paper used. On the special Epson 720 dpi coated stock, the results were good, while on some types of plain paper, it was very poor.

When you require first-class quality, test as many coated papers as you can get your hands on and stick with one that works and bear in mind that the Epson coated paper costs around 12p a sheet.

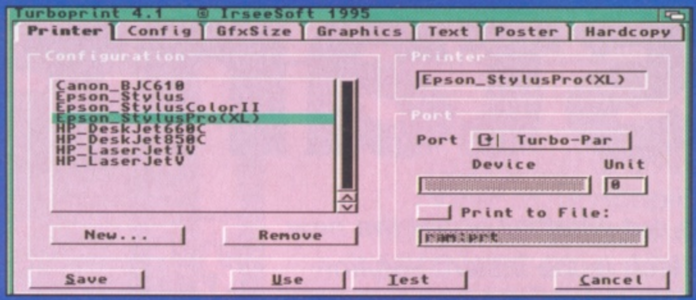
When printing in colour, there was certainly a noticeable improvement with colours being much more vibrant than those produced on the older Stylus. In some cases, this meant colours were too dark and the brightness had to be increased. In the main, though, it worked fine.

The big obstacle, and one reason why I prefer to use non-PostScript printers on PCs and Macintoshes, is the print time. The same page on an Amiga took around 20 minutes compared to the five minutes from the much more powerful PC. Add an '060 to the Amiga and the times would compare more favourably, but with the cost of such a board being what it is, you could almost buy a PC in its place and have two computers and really solve any printing problems you might have.

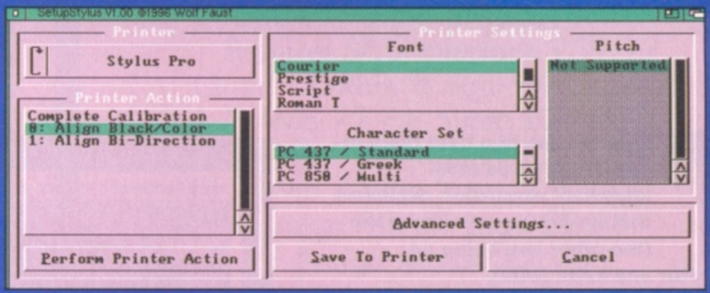
Where the Amiga really fell down was in printing landscape pages. The printing time went through the roof and although the quality was OK, you have to be patient to put up with output times in excess of an hour.



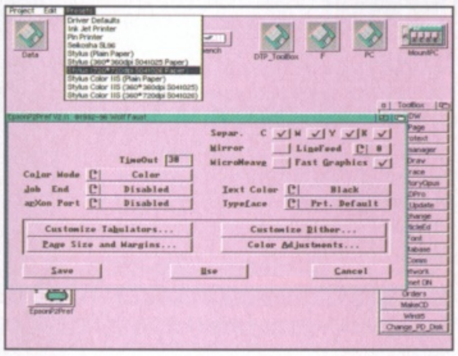
TurboPrint's Print Manager enables you to produce superb quality posters using either the Stylus 500 or Stylus Pro.



Like Studio 2.11, TurboPrint 4.1 supports many models in the Stylus range except the Stylus 500. This should change as the authors get time to update their drivers. The older Stylus II driver works with the Stylus 500 though.



A new utility is included with Studio 2.11 to calibrate the heads on the Stylus Pro and some other models like older Colour Styluses. The Stylus 500 was not one of those supported at the time of this review.



Studio 2.11 does not have direct support for the new Stylus 500, but will nevertheless drive the new model.

Overall, I don't think there is much of an improvement with the Stylus 500, but if you take into account how good the Stylus is in the first place, any improvement must make it pretty attractive. The only decision, therefore, is do I buy a new Stylus 500 or spend a little more on getting the 'Pro' model?

Stylus Pro

Over the last few months, I have received a number of queries from people who have seen the price of the Stylus Pro dropping and have asked, is it any better?

The short answer is yes, but not a lot. The Stylus Colour Pro, which sells for around £120 more than the Stylus 500, is a big printer. So wide, I couldn't fit it on my table normally reserved for printers being tested. The Pro had to have its own desk space and a lot of it.

Why it has to be so big, I'm not sure, but it's size does give you a feeling that here is a more rugged printer. The paper is fed into the printer from a covered tray on the front of the Pro and is fed past the same type of print head arrangement on the Stylus 500. I notice from the specifications in the manual, however, that the 500 has more nozzles on the colour print head than the Pro. This doesn't seem to make much difference because the output from the Pro is very similar to the 500 and if anything, is slightly better.

Attached to the print head are larger ink containers, the same as the ones on the original Colour Stylus. Whether the inks in these cartridges will be the same as used in the Stylus 500 is anybody's guess because I couldn't get an answer on this.

Of the other differences, the most notable ones are the options of networking on the Pro as well as a slightly larger input buffer. I found the paper feed was more reliable than the one on the Stylus 500.

Whether the Pro model is worth the extra money, I'm not sure. I like the bigger cartridges and the more robust paper feed, but £120 is a lot to pay for these modest benefits. For a printer that is aimed at professional colour users, I don't understand why the coloured ink isn't held in separate reservoirs so you only refill the one you need, such as you do with the Canon 610. Also, for a printer of this size and the type of user it is aimed at, a PostScript option should be available. Hewlett-Packard's 1600PS has one and the Stylus Pro could compete well with it if it did too.

The A4 Pro proved to be a disappointment although I'm sure the same could not be said of the A3 model, the XL, which does give you more options such as using larger paper which the Stylus 500 does not like. ■

Epson Stylus Colour 500

Price: £291 (high street)
Supplier: Epson
Contact: 01442 61144

Verdict: 92% **Star Buy**

Epson Stylus Pro (A4)

Price: £436 (high street price £382)
Supplier: Epson
Contact: 01442 61144

Verdict: 89%

Instant Drive

David Taylor *finds out whether or not the new hard drive from Eyetech is the instant solution that it claims to be.*

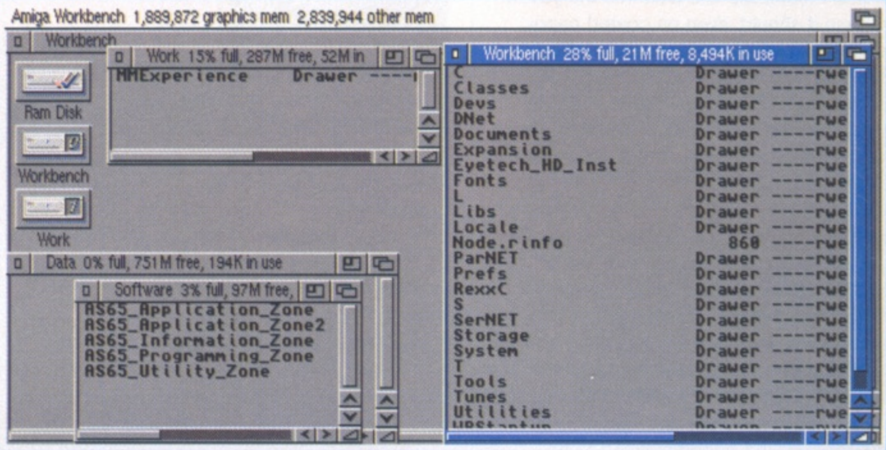
The purchase of a hard drive is one of the three most important expansion decisions that an Amiga user can make (the other two being an accelerator and extra RAM). Nowadays, and in fact for many years, no other platform would ever be released without a hard drive fitted. While it is a tribute to the Amiga's compact operating system that it can run from floppy, the more people that fit hard drives the better. The addition of a drive allows software developers to create more powerful packages and, while some might say hard drives encourage sloppy programming, there are simply limits to the amount of features that can be crammed into a program that fits on a floppy.

While fitting a hard drive is actually remarkably easy, many people are not confident enough to do so and either don't bother upgrading at all or pay around £30 for an engineer to do the installing for them. The Instant Drive package from Eyetech should go some way to alleviating this drawback because it is one of the new easy fitting hard drives.

Normally when fitting a 3.5" hard drive to an A1200 you would be required to cut away some of the shielding inside and people have been rightly worried about this sort of modification. The new ultra-slim drives can be fitted without any changes made to the casing and have also solved the power consumption problems that earlier 3.5" drives suffered from.

Anti-static

The drive itself is a Seagate which gives you some assurance of the quality. It's very slim and yet it has a capacity of 1.2 Gb. Coming with the drive is an extensive booklet which gives you all the information you need to fit the drive. Unlike other drive producers, Eyetech have gone to great lengths to ensure that you don't have any problems with static electricity which can cause errors with a drive. I can't say that I've ever had that problem anyway, so maybe it's more of a selling point. The anti-static precautions for installing the drive may seem a little excessive, but it is better to follow them than to break your new drive. Again, unlike other drives, there is an earthing cable provided. This can be attached directly to the case to stop static ever building up in the first place.



The drive comes ready partitioned and there is lots of pre-installed software. This all helps to make use of the drive more comfortable and efficient.

Fitting the drive is very easy. Open the A1200 casing and lift the keyboard up. The ribbon connector fits onto the motherboard connector and the drive sits where the 2.5" cradle is. Obviously, you remove the cradle, then you can put the drive in, fixing it in place with the industrial strength adhesive pads that come with the drive.

Like other 3.5" drives, the power is taken from the floppy drive. To do this, you have to disconnect the power lead for the floppy from the board and then fit the hard drive power lead. Next, you need to re-connect the floppy in the hard drive power thru-port. It's that quick and simple – nothing to worry about.

Installed software

When you power the machine on, the drive takes a second to spin up and then Workbench boots. Eyetech have done an incredibly good job with the partitioning of the drive. While experts might find that they want to re-format their drive to meet their own specifications, beginners will be very happy.

Not only is it set up with four partitions, but there is also a lot of PD and Shareware software pre-installed and ready to use. Without any work on your part you already have many of the utilities that you need for the running of a hard drive ready. There's things like GUIArc, DiskSalv 2, Lha and many more.

ToolsDaemon has already been set up so that all of the programs can be launched from the Workbench menus. It's excellent, particularly as they have used the software to tweak the Workbench environment.

As if that wasn't enough, you also get the complete MMExperience program pre-installed to. This AF Gold winning multimedia authoring package from Optonica is a great place to start exploiting your hard drive and for "free", you can't go wrong. This partitioning and software provision shows some real thought and it will definitely pay-off for the user.

This really is a flawless piece of kit. Anybody who can use a screwdriver should be able to fit it and the manual covers every angle so you are confident that you can do the job before you start. You may not even invalidate the warranty by opening the case.

Prices of hard drives do fluctuate and even if you have to pay a little extra money for this drive for the work that has been done then it is still well worth it. If you haven't got a hard drive yet then what are you waiting for? ■

Instant Drive

Price: £219.95
Supplier: Eyetech
Contact: 01642 713185

Verdict: 94%

CD check out

*Another basketful of CD-ROM releases fall under the watchful gaze of **Nick Veitch**.*

Every month more and more CDs are released, making it the fastest growing sector of the Amiga market. This time we'll be taking a look at three of the most interesting CDs yet...

Developer CD v1.1

Getting decent information out of Commodore was always a problem, and nobody felt this more keenly than the developers, who often had to wait months after new hardware was introduced before they got their hands on the relevant documentation.

Things improved slightly under Escom, and Amiga Technologies finally got around to releasing developer information on CD. This is the first such CD to be widely available and includes all the official documentation, plus a whole bunch of extra stuff.

If you are a programmer, you really need this CD. The official 3.1 Native Developer Kit includes all the headers and libraries you will need for OS compliant software and there are plenty of examples detailing features new to the OS in 3.0 and 3.1.

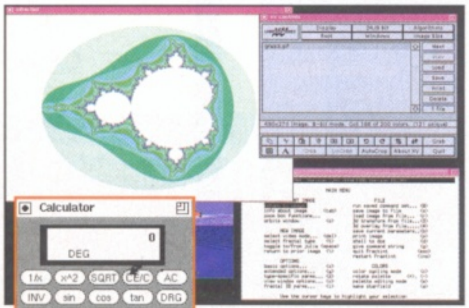
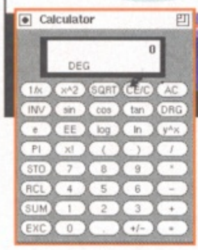
The CD also includes much of the 2.04 developer kit, including all the Rom Kernal Manual examples, a complete set of recognised IFF file formats and the MIDI, Sanall and Installer developer kits. Some of the third party material includes excellent documentation and examples for the Envoy networking package, courtesy of Dale Larson and IAM, the INet255 developer kit and Mike Sinz's Enforcer.

If you are thinking about getting really ambitious, there is a complete suite of CD tools here as well, including source and applications for creating CDXL files, and Commodore's rather primitive, but workable, BuildCD software.

Although the CD only contains 58Mb of data, it's the quality of that data that really counts and if you are planning to develop software for the Amiga then this CD is nothing short of essential.

Developer CD v1.1

Price: £14.99
Supplier: Epic Marketing
Contact: 0500 131486
Verdict: 89%

Here are just some of the X-Windows applications that will run happily on your Amiga.

Gateway 2

Okay, it isn't really everybody's cup of tea, but giving your Amiga the flexibility of the Unix operating system can be useful. Readers of Amiga Format may have seen the feature on the NetBSD software in the September Issue.

With a Unix operating system, you can run all sorts of software. There is a very large public domain scene for Unix applications, although the sort of things you find there are very different to the normal Amiga PD stuff, as they tend to be written by and for academic institutions. The only real problem with NetBSD is that if you are unfamiliar with Unix, it can be a real headache trying to work out all the bits you need and where you have to put them. The original Gateway CD, which includes everything necessary to run Unix, went part of the way towards solving this problem. The new version is much better.

A new boot script means you can now boot up straight into Unix. The script attempts to work out what machine you are using and does all the necessary configuration.

So now you can try out Unix and loads of the applications before you install it onto your hard drive. In fact, if your needs aren't too demanding, there is no need to install it at all – you could simply boot from the CD every time you want to run Unix.

The CD also includes X-windows, the Unix GUI environment, and a whole host of other applications.

Gateway 2

Price: £19.99
Supplier: Active Software
Contact: 01325 352260
Verdict: 86%

Aminet Set 3

The Aminet series of CDs have been the most popular Amiga CD-ROMs. Compiling all the updated software since the last set, Set 3 contains four CD loads of goodies, no matter what your specific areas of interest are, and it has to be said that it is easier to find and access the various files this way than on the single Aminet discs (if you can wait for the compilation set to appear).

It has been a good period for the Aminet. Although the volume of submissions may have dipped down a bit, the quality of the software has certainly gone up. On this set you will find almost 100Mb of utilities and disk tools, including indispensable commodities such as MultiCX, FinditGUI, Screenmaster and more.

For the word-orientated, this set includes the rather excellent ASpell (which featured on a previous AS Coverdisk), GoldEd and FrexxEd (although a later version of this is now available on Aminet). There are even 36Mb of scaleable fonts here, as well as many bitmap fonts.

3D enthusiasts haven't been neglected. As well as over 40Mb of 3D objects, this set also contains the full commercial release of Imagine 4.0. Recent Aminet CDs have featured commercial software before, including programs like XiPaint and Typesmith 2.5. Typesmith isn't on this compilation, but XiPaint 3.2 is, along with OctaMED 5 and five previously commercial games.



Aminet Set 3 is a 3D graphics delight

Once again this is a set which can be heartily recommended. Even if you have all the recent single CDs, it's almost worth getting for Imagine alone.

Aminet Set 3

Price: £24.95
Supplier: Active Software
Contact: 01325 352260
Verdict: 90%

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WANTED

● **Hard drive, extra RAM** and/or accelerator for A1200. Need bigger than 100Mb hard drive and at least 4Mb extra RAM. Cash waiting. Call ☎ 0121 744 1788 after 5pm (Gavin).

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PERSONAL

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Amiga answers

C Crash Problems

Coding

I've been learning C for several months and have obtained a number of Public Domain C compilers including NorthC. Although I am at the stage where my, admittedly simple, programs compile without any errors, they still frequently crash my machine and I don't understand why.

Johnathan Wicks
Easton, Somerset

All it really means when a compiler compiles something without producing error messages is that the code is 'syntactically correct', that is there are no C statements present which are grammatically wrong. Unfortunately, even when you've got to this stage there are still many things that can cause a program to crash – making library calls without opening the appropriate library, trying to return memory that hadn't been acquired in the first place, not checking that library function calls were successful – can all cause difficulties.

The bad news is that with NorthC, and other older 'K&R style' Public Domain compilers, you are more likely to encounter difficulties because all have poorer error feedback than commercial C compilers. Without seeing your code there's little specific advice I can offer except that you ought to check each line of your code very carefully.

Since you are still at an early stage in learning C, you might also consider changing to DICE C which is an ANSI C compiler. This has far better error checking than, say, NorthC and, being a modern compiler, allows the use of prototypes which enable the compiler to check that functions are being used properly.

The change of compiler alone may well help you pick up on errors that your existing compilers are missing. But don't buy the commercial version of DICE C until you are happy that C is the language you will be sticking with. There is a cut-down trial version of DICE, available from most PD libraries, which I'm sure will be adequate to start with.

Paul

PC Pictures

Software

I would like to use PC format disks on my A600. I have a VIDI Amiga 12 digitiser and I would like to transfer pictures to the PC. My PC takes high density disks, but my A600 only reads double density disks. I have heard that PC Task can transfer information and even run Windows, but needs Workbench 3 to do this (I only have Workbench 2.04). Please help me, as the whole thing is very confusing.

Robert Wilson,
Middlesbrough, Cleveland

The important distinction to make is that between an emulator (such as PC Task) and utilities for reading and writing particular floppy disk formats. PC Task is a program which runs on the Amiga and can run PC software. PC Task will work with any version of Workbench.

But you don't actually need an emulator. You need a utility to read and write to PC floppy disks, or more accurately, MSDOS format floppy disks. CrossDOS is this utility,

The experts at hand to help you...



This section is here to help readers who are experiencing difficulties with their hardware or software. Our panel of experts will do their best to solve your problem and get you back on track. Keep those questions puring in and remember, if you don't want to cut up your magazine, you can print out the Amiga Answers form from the Coverdisk. Or, fill it in, and send us the disk with your question on it.



Paul Overaa is our Operating Systems programming expert. He's written several books, including: Mastering Amiga Assembler, Mastering Amiga ARexx and Mastering Amiga C. When he's not drinking red wine or wind surfing, Paul can be found making music and designing programs on his Amiga.



John Kennedy is our hardware and music expert. He has written Supertests and features alike for Amiga Shopper in the past – this month he continues with his CanDo tutorial on page 44, teaching you everything you need to know about this excellent program.



Gary Whiteley is our expert on video and graphics. He regularly produces work for films and TV. Gary has also written several books on his favourite subjects and these include Amiga Desktop Video, published by Future Publishing (call ☎ 01225 822511 to order a copy). Gary also regularly reviews new products for Amiga Shopper.



Larry Hickmott is our DTP and word processing expert. He produces his own DTP magazine, called Em, and has written several books, including The Wordworth Companion for Digita and Future Publishing's books division.

Answers contents

If you're looking for a particular problem, this handy index will help you find the answers you need:

and it's supplied with your Amiga.

As you say, your A600 has a double density disk drive and the PC has a high density drive. This is not a problem, because the PC can read both high and double density disks. You can therefore format the double density MSDOS disks on either the Amiga or the PC (Windows on the PC will ask which format to use, and you should select 720K). You can then save the VIDI digitised pictures on to the floppy and read it into the PC. You may need some further utilities to convert between image formats, because the PC is happier with GIF than IFF.

John

Who owns ProPage?

Software

I own an A500 with hard disk and 8Mb of memory. I am interested in DTP and friend said that a software company called Gold Disk used to produce an excellent DTP package called ProPage. He said it was now being developed by another company. Could you give me details on where to purchase it, please?

Also, my friend said an extension to ProPage called ProDraw was on a disk on an Amiga magazine. Could you tell me if I can buy it?

I'm going to need a printer, something under £500. What would you suggest in terms of print and colour quality and cost of consumables?

AJ Baldwin
Cleveland

Let me deal with Professional Page first. As it happens, he says with a broad smile, it was my own business (LH Publishing) that took over ProPage, although only under license from Gold Disk (now sold to another company). In other words, we are not developing the program although we have the freedom to do our own packaging with new manuals and so on.

ProPage is available in two forms, one on CD (DTP ToolBox) and the other on floppy disk. Because you haven't mentioned if you have a CD-ROM drive, I assume you do not and will want the floppy disk version. It costs £49.95. Ring 01908 370 230 for more details.

As for ProDraw, it did appear on a Coverdisk, but that issue has now sold out. If you would like to know more on about ProDraw, ring LH Publishing (as above) for details.

On the subject of printers, there are a number that are well suited to the Amiga. The most cost effective is probably the Canon BJC-610 because printer drivers for it are free, inks are held in individual containers and the quality is very good. Others worth a look however, are the Epson Stylus Colour 500 and the Hewlett-Packard DeskJet 850.

The latter two printers, however, require a third party printing enhancement package (around £50) for which there are two currently available. These are TurboPrint (Wizard Developments) and Studio II Professional (HiSoft). A slightly cheaper package called the Endicor Driver is available from a company called Eyetech for the Epson Colour Stylus.

Larry

Failing floppy

Hardware

I have has a lot of trouble with a Power PC880B external drive. The drive has been tried on my A1200, a friend's A600 and a new A1200 in an Escom shop with the same result. I have a basic A1200 with 2Mb RAM and a Star LC24-200 colour printer and this drive. Whenever I try to format a disk it gives the name DF1:???? And cannot be used. Sometimes it gives the name DF1:NDOS also unusable. It also gives various read/write errors to any disks I try to read. These faults are inconsistent and it sometimes performs OK.

I have been in contact with one of Power Computing's technicians about four times. He advised me to use a disk drive cleaner which I did (at a cost of £9.99) with no result. Next he said that I could have the drive checked for £15. I did this and later received a phone call telling me the PC880B needed a new drive mechanism at £17.50 so I sent a cheque for this amount.

On receiving the drive after repair, I found it was much noisier than before and still did not perform correctly. I contacted Power Computing again and had the technician then said that the PC880B external drive I have is not compatible with the A1200.

However, on reading the instructions on the disk supplied with the drive, it mentions the drive being fitted to an A1200. I sent the drive for repair again and it came back with a note stating that no fault could be found but that 'it' had been replaced, meaning the drive mechanism, I suppose. The drive is still not working.

I would appreciate your thoughts on this matter as I'm feeling very let down. Thanks for the great mag which I have read since issue three. I feel sorry that *AS* is very sick and getting very thin – the loss of a disk hurts a lot, but I will stick by you and hope you get well soon.

Joe Wicks
Dagenham

Well this is an odd one. If it is the drive that doesn't work, then Power should have found this, but if it was down to the port on your computer, then you should have found this out for yourself when testing it on other people's machines. Problems like this can sometimes be down to the power supply being drained, but I doubt that you used the same supply on all the computers and even so, you don't have enough connected for this to be a problem.

It does seem that you have ended up spending a large amount trying to get a floppy drive repaired. You could have bought a new one for that amount. If the alterations have made no difference, I would suggest asking Power to put the cost of the drive mechanism towards a new drive instead or you could continue trying to get it fixed, but it doesn't look as if anyone can trace the fault.

Dave

Save and Save As

General

I've just bought a secondhand Amiga with a collection of Amiga software and I'm confused about the difference between the Save and Save As options which many of my programs have. Also things seem to be automatically saved to the disks my programs are on rather than on the blank disks I insert.

T. Dukony,
South Harrow, Middlesex

The first time you save a file you should use Save As because this allows the initial file name to be chosen by you. Even though programs may bring up a requester asking for the program disk to be inserted initially you can usually either just cancel that requester and, once the real file requester appears, swap to your blank disk and use the Volumes button to select df0 (or whatever drive you have your blank disk in).

Some older programs may actually have a requester with separate device buttons and in this case you can select df0: directly. Either way, once your blank disk has been 'logged in', you'll be able to select an appropriate directory and save your file. You normally only use Save to update an existing file that you have re-opened for further editing!

Paul

Raw Sound Samples

Music

I'm trying to use sound samples with HiSoft Basic, but have been told that I should use raw samples because there are no IFF based sound commands. Can you please explain what a raw sound sample is?

Petro Campana
Rainham, Essex

When you record a digital copy of a sound the sound sampler measures the sound waveforms being presented as input and stores them in memory as a series of numbers. This digital form, which is the digital equivalent of the original sound, is called the raw waveform data. Raw sound sample files are just binary files containing this digitised waveform data.

IFF files contain the same sort of waveform data, but they also contain information which enables a playback program reading the file to determine how the sound should be played.

The normal way of producing raw sample data is to load the equivalent IFF sound file into a sample editor and then save it out in the raw format. Not all sample editors can do this but many, including the editors which come with both OctaMED Professional and the new OctaMED Sound Studio, can.

By the way, loading and playing sound samples from HiSoft Basic isn't quite as

▶ 36

straightforward as the manual suggests. Although it's easy enough to get the sample into memory using the BLOAD command, it is also necessary to convert the waveform into an integer form before it can be used (otherwise you'll get run-time errors). The example shown in Listing one should get you started.

Paul

Joint Account

Tips

My father is getting the Internet installed on his PC via CompuServe. Is it possible to share it with my A500? I'm not in a hurry because I am waiting until the successor to the A1200 comes out. What software would I need? Is it worth it? Would I need a new modem? (My dad has an internal modem.)

Darren Vitarana,
Harrow Weald

He must have an extremely large PC to have the entire Internet installed on it! Sadly, CompuServe is one service which is not compatible with the Amiga. Although CompuServe used to offer a text-based interface, they are currently moving to an HTML type page structure and the end result is that it would not be possible to share an account between a PC and an Amiga.

If your father was using a standard dial-up Internet account with a Service Provider such as Demon, then you could have shared the account. You would need your own modem (a internal modem is no use to an A1200) and also copy of AmiTCP or Miami. You could then run a Web Browser, news reader, IRC, FTP and all the other Internet utilities.

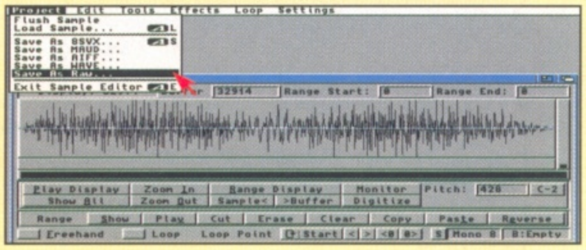
Yes, it most definitely is worth getting connected, but when your Dad is on-line you can still use Usenet to read Amiga newsgroups and also download Amiga software and use CrossDOS to transfer it to your A500. (For more on the Internet, turn to page 15.)

John

Listing one

```
REM load/convert sample of size SIZE%...
BLOAD "raw",VARPTR(raw%(0))
raw_p&=VARPTR(raw%(0))
FOR i=0 TO SIZE%
        sample%(i)=PEEKB(raw_p&)-128
        raw_p&=raw_p&+1
NEXT i
ERASE raw%WAVE 0,sample%
```

Listing 1: One way of loading and converting raw sample data for use with HiSoft Basic (see Raw Sound Samples).



OctaMED Pro's sample editor is one of several which allow raw soundwave data to be extracted from IFF sound sample files.

New Clothes

Hardware

As we might have a wait before a new Amiga is available, I wonder if it is feasible to fit an A600 motherboard into an A500 case. This would allow IDE HD and 620 accelerator to be fitted, and SCSI through the PCMCIA interface. What is the availability of A600 boards, and at what price? As future Amigas may have to be built by hand from Ed motherboards, what alternatives are there?

Magazines are so monochrome that they give the impression that if it ain't a PC it don't fly. Surely Archimedes and others have text editors, word processors, paint programs, assemblers and languages from which a PD scene as great as the Amiga's could spring. After all, not everyone can afford a Pentium PC and Visual Basic.

J. D. Gray,
Hampden Road, London

I wouldn't want to say it would be impossible, but it would be hard work to fit an A600 into an A500 case. The configuration of sockets at the rear is different, as is the trapdoor panel, and then you'd have to take into account the different keyboard and the position of the PCMCIA slot. And once that is all taken care of, there is still the fact that there isn't much space inside the A500 case anyway.

A much better approach would be to house the motherboard inside a PC case, and make use of the uprated power supply, drive bays and general increase of space. It might just be possible to obtain A600 motherboards from a repair shopped locked in a time warp, but the classified column in your local newspaper (or Reader Ads in AS) would be a better bet. An A1200 would be infinitely preferable anyway, because limiting yourself to an 68000 (or 68020 with expansion) processor is not the best way forward.

The Amiga/Ed prototype I saw at the Toulouse show had a great deal of expansion potential, including a keyboard socket and hard drive interface. You may not have to re-house an Amiga/Ed to obtain a first class Amiga computer. One thing you can be sure of is that as long as the Amiga exists, people will be doing all sorts of bizarre things with them.

Of course, no one needs more than a 80286 or a 68000 based computer and a text editor, but people like playing Quake. You can't stop progress, and if you shop around you can get a DX2/66 PC for under £200 these days.

John

Icon if you can

Software

I would appreciate help with the de-archiving/installing activities in respect of Iconian 3 from the Application Zone on *AS*64's Coverdisk. I have attempted to install this to both hard drive and floppy. In both cases, I get the message "Unable to open your Installer tool" at the stage when I follow your guidance to get "certain files" added.

Initially double clicking on the HD icon started the loading process, but came up with a message saying that a library it needed was not available. Using SID I was able to copy this library into my DH0:Libs and a subsequent double click on the icon started the loading process again.

This time it needed a Class; so I copied to DH0: all the contents of the Iconian 3 Classes drawer and also the Gadgets drawer for good measure. A bit further along the loading process

HISoft Basic tutorials: case selection statements

A few readers have written in recently asking why I bother to use case selection statements and include subroutines which do absolutely nothing in some of my HiSoft Basic tutorial code. To be honest it's just a matter of style but there are (I hope) always good reasons for the conventions I adopt. In this case the first point to be made is that do nothing routines enable me to show explicitly when an event is being thrown away or otherwise not used. For example, in the test10.bas code provided with the September issue, a case selection fragment was included which looked like this...

```
SELECT CASE g_item%
        CASE 1 TO 2: GOSUB DoNothing
        CASE 3: g_exit_flag&=TRUE&
        CASE ELSE: GOSUB DoNothing
END SELECT
```

In this instance cases 1 and 2 were menu items which, though they had been created for example purposes, were not actually being used, And the 'else' case was providing a sink for any unexpected menu events that might pass through the menu handler.To make use of the first two existing menu options all I'd need to do is replace the reference to the DoNothing() routine with routines which did something. Similarly if I wished to extend the menu structure the case statement could be made to grow accordingly just by adding additional case tests. Another benefit is that by adding temporary print code to a 'do nothing' routine I'm often able to see those events that, in the finished example, I would be discarding without having to alter the main code for the program. So in this sense I end up with a little more flexibility!

I'll certainly agree that these conventions mean you end up with slightly more code. I could for example have achieved the same result as the case statement fragment shown above with just one line of code, namely...

```
if g_item%=3 then g_exit_flag&=TRUE&
```

Fine as it stands, but this doesn't tell me that out of three menu options two are being discarded – and it doesn't provide an easy expansion path if the example was to be used as the basis for a more complex program. Now I know that once another menu item was in use we could go for an IF-THEN-ELSE arrangement, extending it further by nesting IF-THEN statements if necessary, but the difficulty then is that the logic of these types of coding schemes soon become hard to understand. The code gets messy, and therefore prone to error, and of course as such a program grew the underlying logic would tend to become less and less clear. To my mind as programs get larger this is the last thing you want to happen. The bottom line is that case selection statements simply do not suffer from these disadvantages – and this is exactly why I use them!

Paul

this time, but I got a "pop.gadget v9" not available. As it has found the Classes drawer and the gadgets drawer is in the same place (DH0: root) I don't know where else it can be looking for the pop.gadget.

I de-archived the program to a floppy, but as I could use the installer the program only loaded as far as it had before. Please bale me out!

W Sharman
Belper

The easiest solution to this problem is to get hold of the Commodore Installer that you are missing. It is included on various Coverdisks from time to time or can be obtained from Aminet or a PD library.

To see where it is checking for the Installer, look in the Icon information (accessed by single clicking on the Iconian installation icon and selecting Icon Information from the Icon menu in Workbench). When you have put Installer in your path (try DH0:c/), you should eliminate this problem forever, which is a good idea because many programs use Installer. (If you haven't found it elsewhere, many commercial programs use it and you could copy it from their installation disk.)

However, you have got a fair way with this one manually. You may have read the answer to this in last month's issue. The best way of solving this sort of problem is to get hold of SnoopDOS 3 from Aminet or a PD library or a Coverdisk and using it. This program sits in the background and watches programs to see where they are trying to load files from and what exactly they are searching for. In this case, it will locate where the gadgets drawer is expected to be. What you should find out from all of this is that you need "Gadgets/" inside "Classes/" inside "devs:", that is: DH0:devs/classes/gadgets. However, as you'll have read last issue, it seems that Iconian actually looks directly in the libs: (dh0:libs/) drawer for both gadgets and classes.

Dave

Devpac dilemma

I have just embarked on trying to learn the 680x0 assembly language. I have bought the Devpac assembler but have also have obtained a C compiler which it appears does not contain the Amiga Technologies (should this now be VIScorp) include files. Rather than buy these can I use the Devpac include files with my C compiler?

Jan Lovang
Oslo, Norway

Sorry, but I'm afraid the answer is no. The files provided with Devpac are the '.i' include file versions which contain assembly language macros, structure definitions, and so on. The header files used by C programmers, although they effectively represent the same sort of system information, are totally different in the sense that the macros and other system definitions are created using C language statements.

Paul

Mosaic Off-Line

Everyone is talking about the Web and at long last I've managed to get Mosaic, AmiTCP, ppp, and all the other comms bits and pieces set up and running. It all seems to be working fine while I'm connected to the Net, but what I now want to do is use Mosaic off line as a local HTML reader. But I cannot get this to work. Every time I double-click on the Mosaic icon I'm told that AmiTCP needs to be running – and yet every time that I run my AmiTCP initialisation script I immediately get connected to my ISP. Is there a way around this or have I got to use another browser for off-line work?

Pat Aldrich
Macclesfield, Cheshire

When you installed AmiTCP you, or perhaps some auto-installer that you used, will have set up a startnet script that, among other things, gets the ppp device up and running. The ppp device also executes a script (which you must have set up at some stage) and it is this script that dials up your service provider.

You could set up a local startnet script that doesn't bring the ppp device to life (resulting in your ISP never being called) but the point you've missed is this – you can start AmiTCP by just double-clicking on the AmiTCP icon. If you start AmiTCP in this fashion, and then cancel the introductory requester that appears, you will be able to run Mosaic in local mode without a problem.

Paul

Fill in and get answers to your questions — AS**67**

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☐ A1200 ☐ A1500 ☐ A2000 ☐ A3000
☐ A4000

Approximate age of machine: ______________

Kickstart version (displayed at the "insert Workbench" prompt)

☐ 1.2 ☐ 1.3 ☐ 2.x ☐ 3.x

Workbench revision (written on the Workbench disk)

☐ 1.2 ☐ 1.3 ☐ 1.3.2 ☐ 2.04/2.05
☐ 2.1 ☐ 3.0

PCB revision (if known). Do not take your machine apart just to look for this! ______________

Total memory fitted (see AVAIL in Shell for Workbench 1.3) ______

Chip memory available (see AVAIL in Shell) ______________

Angus chip (if known) ______________

Extra drive #1 (3.5in/5.25in) as DF : Manufacturer ______________

Extra drive #2 (3.5in/5.25in) as DF : Manufacturer ______________

Hard disk: ______________ **Mb as DH** ______________ **:**

Manufacturer ______________

Extra RAM fitted – type, size in Mb and manufacturer ______________

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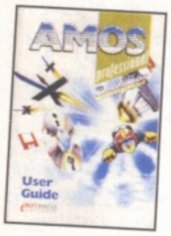
____

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____

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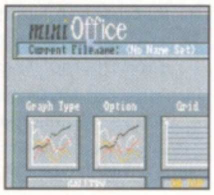
AMOS Pro Compiler 2



Speed up your AMOS programming with the AMOS Pro Compiler 2 from Europress, which F1 Licenceware have re-released for a limited period. If you want to know more about the program, we ran a review of it in the April 1996 issue, where we gave it a respectable 87 per cent.

Description	AMOS Pro Compiler 2
AS price	£14.99
Order code	AS/AM/1
Special subscribers price	£13.99

Mini Office



A collection of database, spreadsheet, graphics and word processor programs from Europress that you shouldn't be without. It can be especially useful if you are planning to set up a small business.

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AS price	Scanning pad £6.99
Special subscribers price	Scanning pad £6.50
AS price	Mega Mouse 2 and scanning pad £14.99
Special subs price	Mega Mouse 2 and scanning pad £14.20
Order code	Mega Mouse 2 AFMM02
Order code	Scanning pad AFSP02



Turbotech Clock Cartridge

Your Amiga will always know what day it is with this handy device – even when it's switched off! Once the software is installed, boot up and the time and date are already set. Fits into the disk drive port (or on the back of your second drive).

Description	Turbotech Clock Cartridge
RRP	£19.99
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Issue 66

Software for free? We found out just what you can achieve with the free and nearly free software available from the Aminet archive and from PD Houses. This comprehensive feature shows you how you can get the most out of your Amiga even if you are on a very tight budget. Why pay more?



Issue 65

The Amiga is the ultimate multimedia machine but do you know how to get the most out of it? Graeme Sandiford has all the information you need in our extensive feature. Reviews of the Surf Squirrel, Photogenics 2 and XiPaint 4 as well as all the usual tutorials and regulars. Don't miss out on this issue.



Issue 64

Every accelerator available for the A1200 is tested and rated in our extensive feature. We review the latest version of OctaMED, the Jaz drive and the special edition of Wordworth. And this issue sees the return of Amos. Steve Bye begins by helping you to write a complete utility. £5

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Choice Domain

Forever searching for the perfect Public Domain program, Steve Liddle comes across some great games creation software and wonderful word processors, as well as a handful of nifty utilities.

There's some exciting stuff out there this month, with something for everyone – from beginners who are just looking for their first utilities, who can even start creating their own games now, to experienced programmers who want to expand their programming abilities. Just take a look at what we think of it all and then get on the 'phone and egt hold of it for next to nothing!

DOOPSI Game System

As reported in the News section of *AS* a few issues ago, F1 Software have started a scheme to accept Shareware registrations for certain titles. The DOOPSI Game System and Edword Pro are the first of these titles to be signed up. For the record, DOOPSI stands for Dynamical Object Oriented Programming System Interface, which means it's a utility to create a program using a friendly LucasArts type point and click interface.

DOOPSI is similar in some respects to GRac (Graphic Adventure Creator) which appeared on an *AS* Coverdisk earlier this year. Both GRac and DOOPSI allow you to create point and click graphic adventure games.



The sample adventure supplied with Doopsi is a big let down, it does not show 1/10 of what Doopsi can do.

DOOPSI is easier than GRac to get to grips with, mainly because of the good standard of documentation and top-notch tutorials, something GRac always lacked. DOOPSI has been coded in Blitz BASIC, which means AGA support, also not found in GRac.

An important aspect of this type of program is who will actually be able to use it. I sat down for two hours and experimented and to my surprise understood the basic concept of DOOPSI and how most things work. I believe anyone can use DOOPSI if they are determined enough. Programmers will find it a breeze to use for sure.

Basically, to build an adventure game you must first plan out your game on paper, draw all the background screens and object graphics and gather together all the sound samples and music modules required. You then load DOOPSI and follow the tutorials to lump it all together. Obviously that is a simplified view, but it is all straightforward once you have grasped how DOOPSI likes to do things.

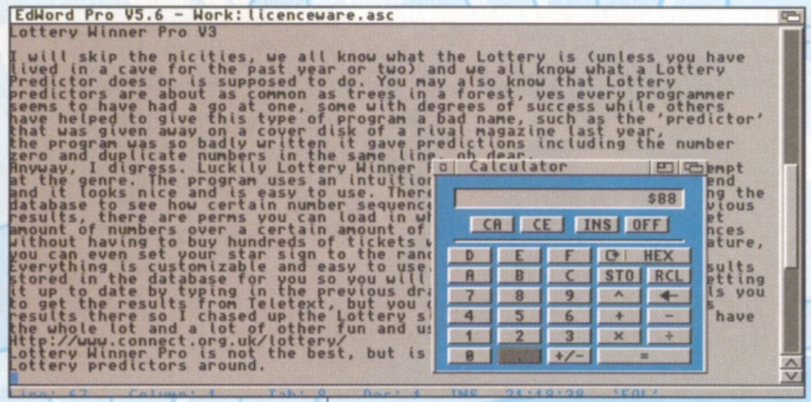
I looked at the Shareware version 1.20 which limits the amount of rooms and objects you can create, but the full registered version costs £18 from F1 Software. DOOPSI is a very good development system. If you do get stuck you can visit the DOOPSI Web page at **http://www.intercom.it/~fsoft/doopsi.html** or even subscribe to the DOOPSI mailing list at fsoft@intercom.it What more could you want?

Verdict: 93% **Star buy**

Who, what, where, when, why, how...

Product	No of disks	Type of product	Price	Supplier	Contact	Verdict	Page
Edword Pro	1	Text Editor	£15 (full version)	F1	01392-493580	96%	39
DOOPSI	1	Adventure creator	£18 (full version)	F1	01392-493580	93%	39
HDClick	1	Menu system	£12 (full version)	KEW=II	0181-6571617	88%	40
Everyday Organizer	1	organiser	£1	KEW=II	0181-6571617	91%	40
Voyager	1	Web Browser	75p	OnLine PD	01704-834335	93%	40
Internet Utils #5	1	Compilation	75p	OnLine PD	01704-834335	80%	40
MSR Music Vol 2	1	Music compilation	£2.95	5Th Dimension	01709-888127	84%	41
BUG	1	Disk Mag	£3.50	SeaSoft Computing	01903-850378	44%	41
Lottery Winner Pro 1		Lottery Predictor	£4.99	SeaSoft Computing	01903-850378	88%	41
HB Clipart 1 and 2	1	Clipart	75p	OnLine PD	01704-834335	50%	41
WordWorth PD 2	1	Disk mag	£4	Ryan Morse	See review	87%	41
Smart Cardz	1	Util/game	£3.99	SeaSoft Computing	01903-850378	86%	42
FMS2	11K	Disk device	N/A	disk/misc/fms_20.lha	ftp.doc.ic.ac.uk	84%	42
HDSleep	30K	Hard Disk saver	N/A	disk/misc/hdsleep.lha	ftp.doc.ic.ac.uk	95%	42
Mammoth Boing!	73K	Demo	N/A	demo/file/m_boing.lha	ftp.doc.ic.ac.uk	85%	42
AppAssign	95K	GUI assigns	N/A	util/app/AppAssign31.lha	ftp.doc.ic.ac.uk	89%	42
X-Traktor V1.41	6K	GUI archiver	N/A	util/arc/X-Traktor141.lha	ftp.doc.ic.ac.uk	90%	42
DFM2	34K	File Editor	N/A	disk/moni/DFM2.lha	ftp.doc.ic.ac.uk	82%	42

▶ 40



Edword's Calculator is excellent, especially useful to programmers for doing on-line hex/binary and decimal conversions.

Edword Pro V5.6

In a lot of people's eyes Edword Pro is the only Text Editor worth its salt on the Amiga. Edword's only serious rivals are Gold Ed and Cygnus Ed which are both aimed more at programmers than general users. Edword caters well enough for programmers although it uses keyword highlights, and so on. But it is also very suitable for general consumption.

So what use is a text editor to you? Edword can be used for editing script files, knocking up a quick letter to print out, writing on-disk documentation, as an e-mail editor, source code editor and even for writing books or articles.

Some of Edword's features put a lot of word processors to shame, for example you can have multiple documents (up to 15) open at the same time which is very useful if you are updating or copying parts of texts. It also has an easy to use but powerful macro facility, and an ARexx port with 24 routines supplied to make Edword even more powerful with little Arexx gems such as 'Centre Block' 'IBM 2 Amiga', 'Strip EOL', 'Ansi Background', and so on. Another useful feature is its automatic PowerPacker support, which automatically uncrunches any PP crunched file you try to load.

Astonishingly, Edword also has AppWindow support which means you can drag a file into Edword from the Workbench. When you save out a text file from Edword there are no character codes in your file – it is all pure ASCII, which means you can load the text into virtually any word processor, DTP or Compiler.

All that really separates Edword from being a low-end word processor is a spelling checker (though you can link up a PD spelling checker if you want), and the fact it does not use embedded codes (which I think is a godsend).

New to V5.6 are lots of small changes and additions as well as some text formatting and justify options which were sorely needed. I know of people who have had to use other text editors simply because Edword does not support full text justification – you can come back now guys.

There are just so many features in Edword it would take two pages to list them, so I will just mention a few more of my favourites: built-in calculator, AmigaDOS command access, Virus check on memory, complete on-line help, word, line and word occurrence count, excellent search and zoom operation, bookmarks, strip codes, and many more.

You must of worked out by now that I am thoroughly impressed with Edword – it has earned every percentage mark I have awarded it. And after three years of development, Edword has grown into the type of program that makes the Amiga great. You can visit the Edword Web site at **http://www.dcs.ed.ac.uk/home/mxr/edword** for more information.

Verdict: 96% Star buy



Voyager is very slick and doesn't cost a bean thanks to the author, hurrah!

Voyager V1.0

Amiga Shopper regulars may recall that when it comes to Web browsers I am a bit of an AWeb fan. And up until now I have been loyal, but this Voyager upstart has me choked. It is better than AWeb in a lot of respects and just to rub salt into my wounds it is pretty damn fast too, especially for a MUI-based browser.

The built-in Usenet support also impressed me. You can use Voyager to browse all the Usenet groups and just download the messages/binaries you want without having to subscribe. There are separate programs, such as Newsagent, to do this but it is great to have it integrated.

AWeb supports FTP/Usenet in the new commercial version, but this version of Voyager is Freeware – yes you heard correctly, Freeware – and it is the full, unadulterated, version too.

Goodbye AWeb, it was nice while it lasted.

Verdict: 94% Star buy

HDClick V3.0

This is a program-selector/HDMenu. It allows you to keep a selection of your most often used programs easily accessible with just one click of the mouse. You have to set the menu up for your own programs, of course, but this is made easy with the aid of a nifty on-screen editor.

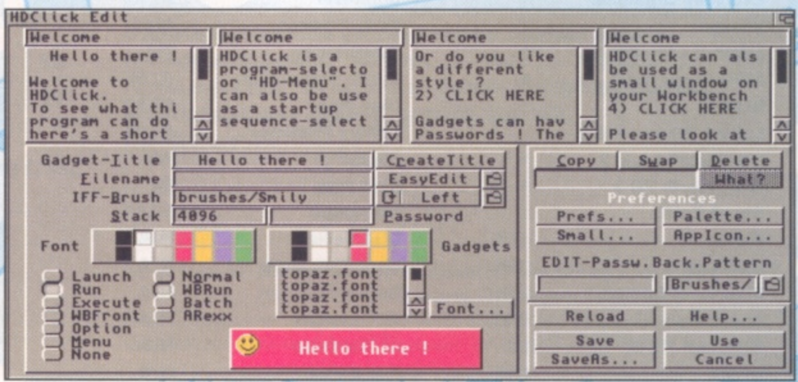
You can do all sorts of things with HDClick, such as play samples/modules, display pictures, execute AmigaDOS and batch files, print text or even uncrunch archived files. The demo version has a 'nag' requester and a pause when the program first starts – an effort to encourage people to buy the full version – but HDClick's author has got it wrong. You are supposed to install HDClick on to your WBStartup drawer so that it executes every time you boot up your system. Who wants to wait for the Shareware delay when you boot your Amiga? I think Shareware demos should at least be usable.

I wouldn't have the HDClick demo on my Amiga because it would drive me mad. But if I had the demo installed and it worked as well as the registered version minus, say, a few essential editing features then I would be frothing at the mouth to register after getting used to having this handy utility on my hard drive. Ho-Hum. Great program, tight demo.

Still, for those of you who have been searching for a way to stop the hard drive whirring sending you insane (and we that means those who have written in asking for a solution to this "problem"), here is your answer.

Verdict: 88%

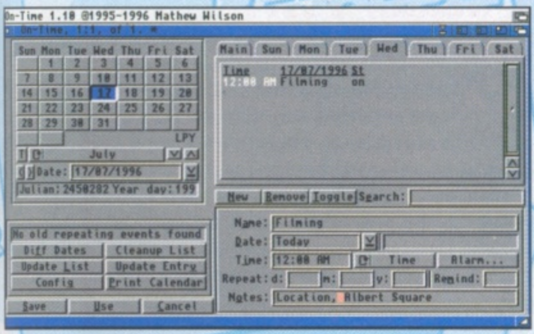
The edit screen is a work of art, how the programmer managed to fit all this on one screen and keeping it uncluttered is remarkable.



Everyday Organizer

Everyday Organizer is also Freeware, things are looking good! EO is an extremely professional and well designed program. It does all the organising you would expect it to do and more. It requires MUI, but in this case I think it is a bonus.

The package comes with an Address Book, Event Scheduler and an Alarm. There are also a couple of small utilities chucked in too, a replacement for the 'Say' command and 'Coder' which encrypts/decrypts files. It is all easy to use, powerful, good-looking and free. Most excellent if you need this type of program.



Everyday Organizer is a bit special for Freeware.

Verdict: 91% **Star buy**

Internet Utils #5

This compilation has three utilities on it, the most interesting being Magic Web Maker which is a rather useful tool to help you build HTML documents for Web pages. There are a few features disabled, but it is useable. Teslar is a modem simulator running over TCP that simulates basic 'modem commands' so comms programs can run over a network connection – according to the documentation, anyway.

The third and last program is HLConvert which converts Hotlists from one browser to another, including Netscape which can be useful to URL collectors.

Verdict: 80%

Hanna-Barbera Clipart 1 and 2

These disks are simply full of black and white clipart images of cartoon folk. The quality ranges from OK to quite good. I can't find any use for them, but somebody will probably be happy to scoop these disks up.

Verdict: 50%

WordWorth PD2

I nearly fell off my seat – WordWorth in the PD, impossible! And I was right. WordWorth PD 2 is just a badly named disk magazine that concentrates on using the excellent (but slow) Amiga Desktop Package WordWorth.

The mag contains superb tutorials to help you get the most from aspects of WordWorth such as printing and Mail Merge. Also included on the disk are ARexx macros, Wizards and templates for all sorts of useful and not so useful tasks, not forgetting lots of general tips.

To get the most from this disk you need to be using WordWorth 5, but WordWorth 3 or better will do. The disk is only available from the author (Ryan Morse) and costs £4, not what I call the spirit of 'PD', nonetheless it is a useful product. Orders to: 9, Tadmarton, Downhead Park, Milton Keynes, Bucks MK15 9BE

Verdict: 87%

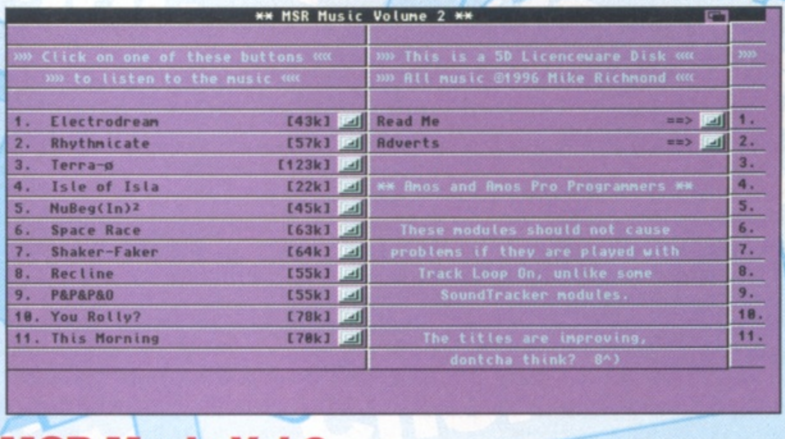
Licenceware Choice

BUG Issue 3

I presumed that by issue 3 BUG would have solved a bug (pun intended) in the background music, which irritatingly cuts out every time you access the menus. It hasn't and the general issue falls below the qaulity of earlier ones. The content, which you can forgive on early issues, has not improved. In fact there is a lot less to read and, more importantly, I can recall reading the biggest article in an old AMOS disk mag! I also think that the font used is difficult to read.

On the upside, there is a tutorial for beginners. There are also some goodies on the disk. There is about 120K of source code, some awful bitmap fonts and 100K of sound samples. The rest of the disk is taken up with Workbench system files, the magazine frontend and a music mod. In my book, 35K of editorial does not a magazine make.

Verdict: 44%



MSRmusic MSR Music II has an antique style menu, but it works.

MSR Music Vol 2

There are 11 ProTracker modules of varying quality by Mike Richmond. The music on this disk is slightly more enjoyable than the first volume in this series, which we gave 80%..

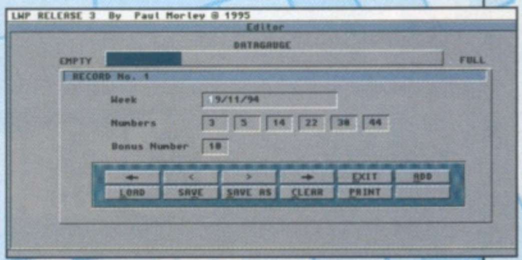
The idea of these disks is to give programmers who can't compose their own music a source of original material, for a small fee. Of course, once the disk sells in quantity the music will be become as common as a PD module which negates the point of the disk. But the music is good and that's what counts.

Verdict: 84%

Lottery Winner Pro V3

We all know what the Lottery is (unless you have lived in a cave for the past year or two) and we all know what a Lottery predictor does or is supposed to do. Lottery predictors are about as common as trees in a forest, some are successful while others have helped to give this type of program a bad name.

Luckily, Lottery Winner Pro V3 is a semi-serious attempt at the genre. The program uses an intuition-based style for the frontend and it looks good and is easy to use. There is plenty to do, like checking the database to see how number sequences would have performed on previous results. There are also permutations you can load in which allow you to spread a set amount of numbers over certain boards to increase your chances without having to buy hundreds of tickets – and you can even set your star sign to the random number generator.



This is where you an enter and edit lottery results, what happens when the 'gauge' is full up, then?

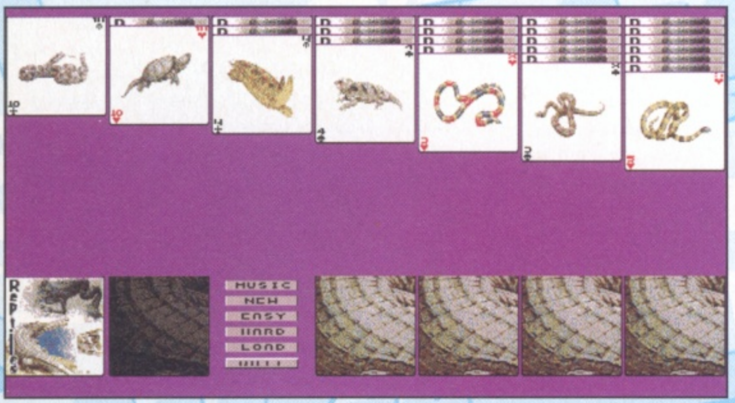
Everything can be customised and easy to use. There are only 46 weeks' results in the database, so you'll need to spend a few hours getting it up-to-date, typing in the previous draw results. The doc file tells you to get the results from Teletext, but you can only get the last six weeks results there, so I chased up the Lottery site on the Internet and they have the whole lot and a lot of other fun and useful things too. Try it at **http://www.connect. org.uk/lottery/**

Lottery Winner Pro is not the best, but it is one of the better Lottery predictors around.

Verdict: 88%

Smart Cardz

All you non-AGA users need slobber and slaver over Klondike AGA card sets no more as Smart



This is the only supplied cardset with Smart Cardz, but there are thousands more available in the Public Domain.



Non-AGA owners can stop crying into their beer now that Smart Cardz is here.

Cardz is here to save the day. What this little program allows you to do is load in any of the millions of Klondike card sets that can be found in the PD and play them, complete with funky music. The program comes with only two card sets, but you will have little problem finding more sets on the Aminet and from PD libraries.

Smart Cardz is a good, well-written program, but I have never understood what the fuss is all about – it is only a game of Patience after all! The only difference is that the backs of the cards have nice pictures on them. Excuse me if this upsets anyone, but I think it is all a bit sad really.

Verdict: 86%

Aminet**Choice**

FMS 2.0

FMS is a file system. It simulates a floppy disk on your hard drive.This has a few uses, like being able to unpack DMS archives straight to your hard drive and people creating floppy disks for distribution can build up the contents on their drive without having to work from floppy.

This new version of FMS is smaller and faster than previous versions and has a couple of minor bugs fixed. The documentation on installing the device could have been a lot more descriptive as I am afraid a lot of beginners wouldn't know where to start, though this sort of program is hardly created with the total beginner in mind. If you can set your own Assign, mount a device and edit your Mountlist file, you will be fine.

Verdict: 84%

HDSLEEP

Another new version of an old favourite. HDSleep is a fantastically simple program that blows you away the first time you use it. I recall being suspicious of the 'HD sleepers' when they first appeared, fearing damage or loss of data to my drives, but I have had no problems.

HDSleep goes in your (already crammed?) WBStartup drawer and so is executed automatically when you boot up. Through its Icon Tool types you can set hotkeys and the timer. It is similar to a screen blanker, but instead of a pretty pattern on your screen your hard drive motor switches off. The hard drive re-activates as soon as you next try to access it. Wonderful. As the author says, now you can leave your computer working all night without being kept awake. If you have your Amiga on for long periods of time, like I do, then HDSleep will help prolong your sanity as well as your HD. This is a little gem.

Verdict: 95% **Star buy**

Mammoth Boing

I stumbled on this demo while browsing around Aminet. I mistook it for the original Boing demo – you know, the demo used to demonstrate the capabilities of the first ever Amiga.

At the time it absolutely astonished everyone and got the Amiga off to a good start in life. Some people think it went mostly downhill from then on, and look fondly back on the 'Boing days' as how the Amiga used to be and should be – exciting and innovative. That may explain the fascination with what is now termed a very simplistic piece of code. Mammoth Boing is a re-creation of that famous demo, but bigger, much bigger. As far as Boings go, this is as bouncy and big as it gets.

Verdict: 85%

AppAssign

I can still remember being confused about assigns when I first got my Amiga. If only there were decent programs like AppAssign around then. AppAssign uses a lovely GUI frontend to allow you to view your current assigns, delete assigns or add new assigns easily by dragging and dropping a disk icon on to AppAssign. The program sits in your 'Tools' menu on your Workbench and so is easily available at any time and it is all very configurable. I like it.

Verdict: 89%

X-Traktor V1.41

There have been hundreds of 'easy to use' archiver GUIs over the past few years, but from a total beginner's point of view most are still too complicated. I think X-Traktor is the simplest program of this type I have ever seen or used. It has some impressive features, too, including support for LZX, Lha, DMS and DSQ archives as well as floppy type devices and File_id options. To compress a file, drawer of files or device, you are asked a few simple questions and it all is done for you. This is how it should have been done from day one.

The same goes for decompression, just tell X-Traktor where you want the decompressed files to go. A godsend for beginners and a good alternative to GUIArc.

Verdict: 90% **Star buy**

DFM 2

This little program allows you to hex edit two files simultaneously. The advantage of this is that you can use DFM as a file comparer and a cheat finder/saved game editor – it is all explained in the doc file. The GUI is plain and there are not many options, but it all works well enough.

Proper intuition screen gadgets would add a lot to this program, as would the ability to run on the Workbench screen instead of its own screen. A good, simple file editor for beginners, although how many beginners are going to want to get into hex editing is questionable!

Verdict: 82%

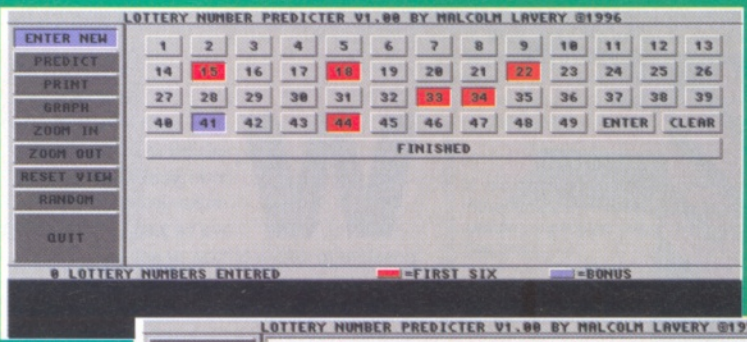
PD submissions

If you have some exciting PD disks that you would like to be considered for review in Domain Choice, send them in to Amiga Shopper, Future Publishing, 30 Monmouth Street, Bath BA1 2BW, clearly marked as a PD submission. We welcome any type of disk, except games.

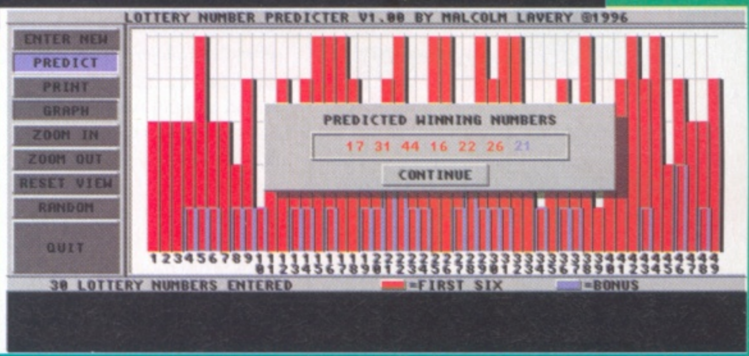
If you are a PD house, make sure you include all the information necessary, such as how to contact you, how much the disks cost and how people can pay. If you are the author of the program, state where people can get your program from, and whether you would like us to consider it for inclusion on a future AS Coverdisk.

AMOS Part 3

Following on from issue 65, **Steve Bye** *and* **Malcolm Lavery** *continue their efforts to help you write a Lottery Predictor program. Just remember them when you make your millions!*



You can now enter all the past lottery numbers into our Lottery Predictor.



Next month we will be adding the prediction routines.

Previous months have seen us up to our necks in code writing a Lottery Predictor program – and a rather nice one it is at that. The following tutorial may not make a lot of sense to you unless you have issues 64 and 65 of Amiga Shopper, so if you missed them you can order back copies (see page 38).

The up-to-date Lottery program source code can be found on this month's Coverdisk. We are going to add a large procedure called '_ENTER' to the program. This will breath some life into the program and you will actually be able to do something constructive with it at last.

The '_Enter' proc allows you to enter Lottery results from previous weeks into the program's database. The resulting data will then be saved automatically to the 'Lottery_Data' file which, incidently, already has the first 30 weeks' results in it to get you started (see Coverdisk).

Obviously, with the space available on this page, we cannot go into too much detail about how everything works but if you get the source code loaded into AMOS and follow this tutorial while looking at the code you shouldn't have too much of a problem understanding what is going on.

Let's get down to brass tacks then. The first nine or so lines of code just redraw the control buttons by calling the '_3D_BUTTON' procedure. We looked at a similar routine in AS65, so I won't go into it again. The next portion of code uses the '3D_Display' routine to draw a nice 3D window display and the mouse pointer is restricted to only moving inside the 3D area using the 'Limit Mouse' instruction. A couple of 'For-Next' structures then clear the 'Picked' and 'Enter' dimensioned arrays by filling them with zeros, ready for your input.

The next part of the code draws 50 buttons and places the required text inside each one. These are the Lottery numbers that you will be able to click on during the entry process. Three more buttons are then drawn 'Enter', 'Clear' and 'Finished'. If you have followed this tutorial from the beginning it should be fairly clear so far.

Next up is a rather large 'Repeat-Until' structure. It looks a little complicated at first, but in essence all it is doing is checking which button you have clicked on and storing the numbers in the dimensioned arrays ready for manipulating into a saved 'Lottery_Data' file. The 'Until' part of the structure is complete when you have selected the seven Lottery numbers (that's the six main numbers and bonus ball number).

The program then jumps from the frying pan and into the fire by going straight into another 'Repeat-Until' loop, although this one is a bit smaller. All it does is wait until you have clicked on the 'Clear', 'Enter' or 'Finished' buttons. Once you have selected seven numbers you must click on the 'Enter' button to make them valid. Clicking either on 'Finished' or 'Clear' will result in you having to re-enter the last seven numbers again or abort back to the main menu. The 'Until' part is met when you click on 'Enter' followed by 'Finished'. The entered numbers, if any, are then poked into bank 8 ready to be saved to disk. The 'POS' variable is a pointer and tells us where we are in bank 8 so that we don't overwrite previously stored numbers.

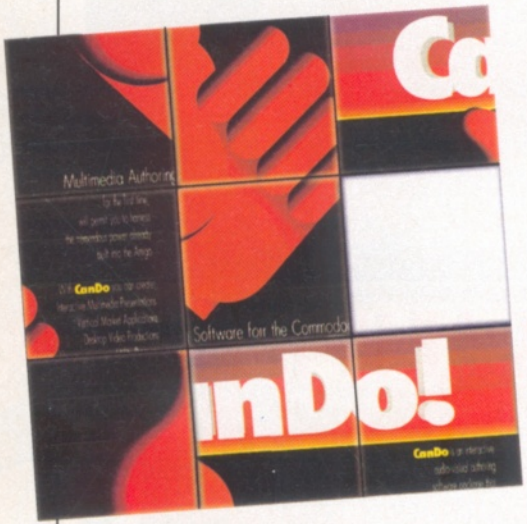
Now a little problem. AMOS banks must be set up with a specific size. Our Lottery data could be any length from 0 to infinity, so how large should the bank be? Should you make it a few hundred K or as large as memory will permit? Either way is a rather sloppy bit of programming. Mal has got around this problem with a neat little trick. He starts the bank off at only 7 bytes long, which is just enough to hold one set of Lottery numbers. When the user enters another set of numbers the program opens a new bank (bank 10) the same size as bank 8 plus 7 bytes. Then it copies bank 8 to bank 10, erases bank 8, re-opens bank 8 the same size as bank 10 and copies bank 10 to bank 8. All that is left to do is erase bank 10 and, voila, an expanding AMOS memory bank. This is all performed in the '_ADD' procedure. If you go back over it slowly it will make sense!

We now come across another procedure called '_Save' which does a simple 'Save "Lottery_Data",8'. This line saves the contents of bank 8 to disk, overwriting the old 'Lottery_Data' file, in effect updating the database of numbers. All that is left to do now is to calculate how many numbers are held in bank 8 with a simple bit of division and render the text to the screen. Next month we will get the random number and predictor generators working. ■

CanDo part 4



Part four of the multimedia database, and it's time to make some features automatically. **John Kennedy** *explains how.*



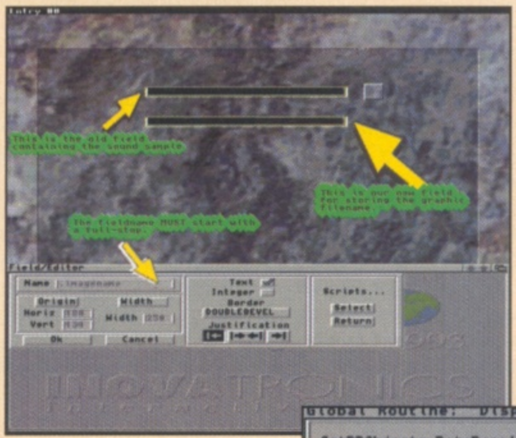
We've seen how fields can be added to make up the individual records which make up the database and we've also seen how it is possible to add a button to act on the fields. In particular, we have created a field which contains the filename of a sound sample and added a button which plays the sound sample when it is clicked. This is the stage we left the database at, with a single field containing the sound sample name and a button to click on to hear it. This month we'll see how to add more fields to the records, but also how to make the database make use of the contents of the fields automatically. In other words, you won't need to click a button to hear the sample – when you display the record, the sample will be triggered.

Of course, there is no reason to stop here. CanDo also includes support for animations so you could even add your own cartoons and mini-video clips. ■

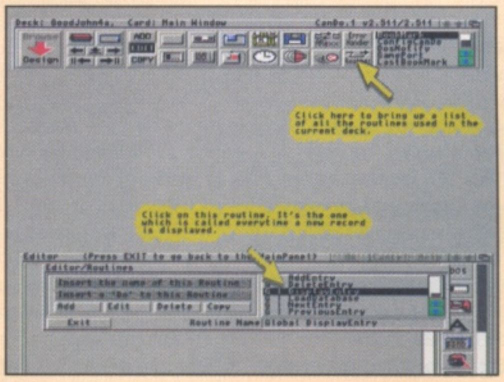
Moving Images

CanDo comes with full support for animations and can replay them with ease. If you want to try something clever and you have an A1200, try and get hold of a VideoMaster unit from Eyetech. This unit will digitise video signals at up to 25 frames a second, and sample sound too. CanDo is the perfect tool for replaying the resulting sound and animations, and it's possible to integrate both into your own deck for state-of-the-art multimedia. More next month.

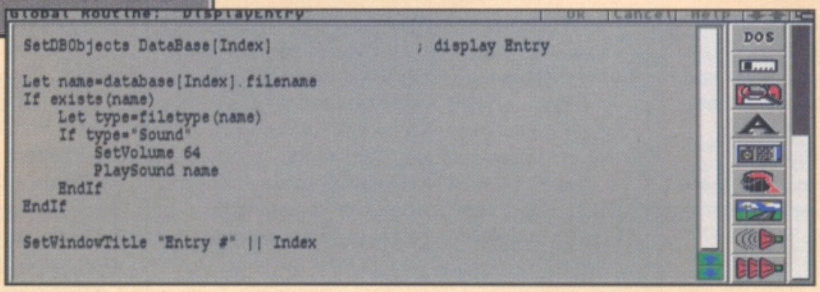
Adding more fields



1. First of all, we are going to add a new field to store a filename of a graphic image. This is done in the same way as with the sound sample button. However, we won't add a button to display the image.



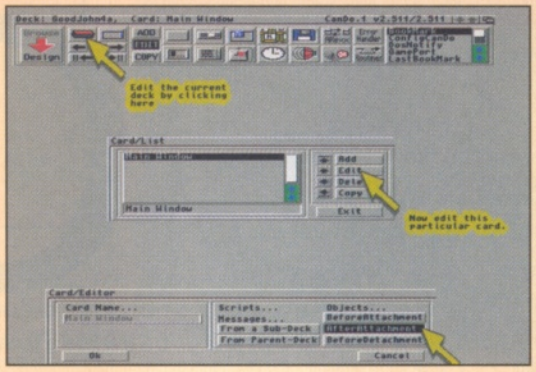
2. Now we can add the necessary scripting to trigger events when a particular record is displayed. First of all, locate the routine entitled "DisplayEntry".



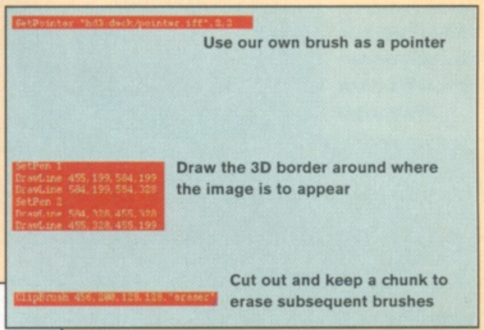
3. Here is what the new script should read like. Notice that as before, the record details are pulled in from the main database variable. However, we have added code to pick out the filename, and check to see if it is a sound sample. If it is, it's played.

Automatic Graphic Display

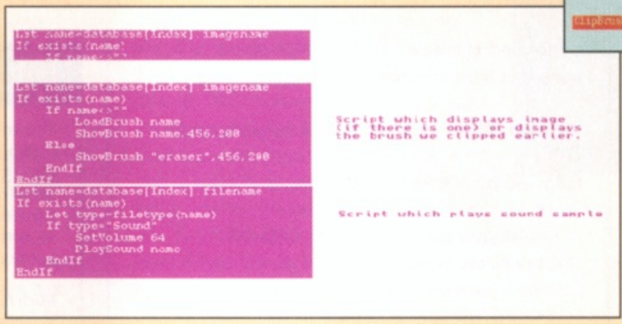
Let's add the same automatic function for image display. The plan is that when you use the arrow buttons to flick through the various records, the image will appear automatically and the sound sample will be played. Think of a database of the CD collection: the cover appears accompanied with a sample of your favourite track. I'm assuming that all the graphics are 128 pixels square, and save as brushes from a paint package. I'm also assuming that the brushes share the same palette as the main marble control panel image.



1. First of all, return to the main CanDo control panel and edit the main deck script. This is the script which is called when the Database program is first started.



2. Now alter the script to read like this. The important parts are highlighted. They draw a thin border, but also make a copy of a square of background. This is to erase any images which aren't needed.



3. Now return to the Routine entitled "DisplayEntry" as used in step 2 of the previous project. Alter the script to read like this.

Brushes and pictures



Load the control panel into a paint program such as Personal Paint.



Load, as a brush, the image. Notice how the colours are all wrong.



Select the brush colour remap feature. The colours will be substituted with the closest match. Now the image brush can be saved.



Displaying graphics can be a little tricky at times, but it's not the fault of CanDo. Here's the problem: you design a control panel (for example, our plush marble effect screen with in laid buttons) and it takes up to 64 colours. So you then use a screenmode of 64 colours to display it. So far, so good. However, imagine that you now want to load and display other graphics. If you load a brush image at random (created by clipping it from an image loaded into Personal Paint for example), you can't guarantee that the colours used in the brush are the same used in the control panel. There may be still only 64 colours. but they probably won't be the *same* 64 colours. Result: a large mess when you display the brush. You could force the screen colours to match that of the brush, but this will only destroy the control panel display. You really only have two options. The first is not to deal with brushes at all and stick with screens and pictures.

When the image you wish to display is loaded, an entirely new screen of the required depth is opened to display it. Although this results in the most accurate display, this can mean overkill and loss of control panel effect. The second option is to alter the colours in the brush to match those already defined in the control panel. For example, if the brush contains 64 shades then the closest 64 shades already in use in the control panel display are used. The obvious disadvantage is that the colours are different and only a "best possible match" can be made. Also, this is quite hard to do "on the fly" as the image is loaded. Certainly CanDo has no built in commands supporting this method, which is a shame. Sometimes the results are quite unpleasant, although choosing a control panel which has a palette containing a large spread of colours will help. For best results you need to convert the images beforehand. The pictures and captions above show you exactly how the process works.

A definitive solution to this problem doesn't exist, because all Amiga screen modes have a fixed number of colours which can be displayed at once: there will always be some image which contains clashing colours. Only when we have true 24 bit (16million colour) displays will this problem vanish, although if you stick to grey-scale images you can work around it.

HiSoft BASIC 2

*There's a touch of music in the air this month as **Paul Overaa** illustrates how high accuracy time intervals can be achieved from HiSoft Basic...*

This month's instalment is on the use of the Amiga's timer device for generating time delays. But HiSoft BASIC has its own built-in timer facilities, so why is it necessary to step outside of BASIC and control the timer device directly? In short, the reason is accuracy and, by controlling the timer device in this way, it is also possible to generate extremely small delay times.

One application where this type of control would be needed is in the playing of songs stored in MIDI file form. Normally the note and other events extracted from such files would control an external synthesiser connected via the serial port and the timer device would be used to make sure that the various MIDI events were sent to the port at the appropriate time. Now the analysis and playback of MIDI files in real-time is quite a complex process, but there is a way of eliminating almost all of the potential difficulties.

The idea is to carry out the MIDI file analysis and decompression and so produce an alternative file structure that is easy and quick to interpret from HiSoft BASIC 2 (or any BASIC).

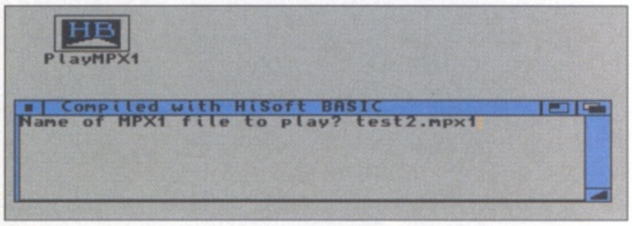
Over the years I've done quite a lot of work on these types of problems and have written quite a few conversion utilities that perform such tasks. Once such file translations have been made the only remaining difficulty is in generating accurate time delays and this, of course, is where the Amiga's timer device comes in. Rather than deal with a conventional MIDI application, however, which would only appeal to a limited audience, I've decided to link these ideas to the Amiga's internal sounds and explain how HiSoft BASIC's WAVE and SOUND statements can be used to play songs which have originally started life as MIDI files. The alternative file structure that enables this magic to be performed is known as the MPX1 format and it uses this type of event arrangement...

<4 byte MPX1 header ID><4 bytes spare>

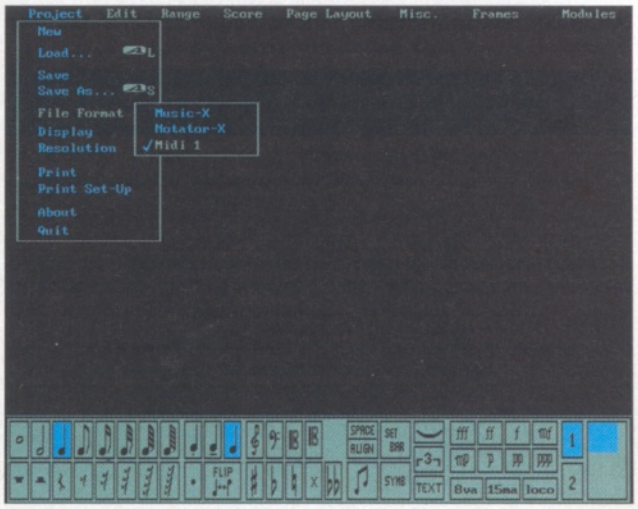
followed by N events stored as...

{
<4 bytes absolute event time (in microseconds)>
<1 byte midi message length>
<midi message itself>
}

In other words, the files have 8 bytes of header information followed by a series of 8 byte events which contain a time field, details of the length of the MIDI message, plus the message itself. Reading an MPX1 file is easy – you just open the file for ordinary sequential input and read the data. The first MPX1 header field lets you check that a file actually is a real MPX1 file before you process it but, providing this is OK, all the player code then has to do is read the time delay field and execute an appropriate time delay before reading and playing the associated MIDI message.



Scores written using Notator-X were first stored as type 1 MIDI files.



Not much to see display-wise, but this month's example sounds better than it looks!

File Conversion Note

The melodies on the Coverdisk were written using Notator-X, saved to disk as MIDI files, and then converted to MPX1 form using the MidiToMPX1 Shell utility (also provided on Coverdisk). For those who'd like to experiment with their own MIDI files the syntax for the conversion utility is...

MidiToMPX1 <midi source file name> <output file name>

The timer device

The timer device is a typical Amiga device which, once opened using the exec library's OpenDevice() function, allows time delays to be obtained by posting time request messages. There are a number of modes of operation, but for short one-shot delays the timer is normally used in what is called 'microhertz' mode. Since the device name used with OpenDevice&() has to be in null terminated (C-style) string form the resulting open statement has to use the SADD() function to specify the device name...

Listing One

```
FUNCTION OpenTimer&
SHARED timerport&,timerIO&
OpenTimer&=ERROR%
timerport&=CreatePort&(0&,0)
IF timerport& THEN
     timerIO&=CreateExtIO&(timerport&,
     timerequest_sizeof)
IF timerIO& THEN
     POKEL timerIO&+tr_time+tv_secs,0
     OpenTimer&=OpenDevice&(SADD
     ("timer.device"+CHR$(0)),UNIT_
     MICROHZ,timerIO&,0)
     POKEW timerIO&+IOStdReqio_
     Command,TR_ADDREQUEST&
   END IF
END IF
END FUNCTION
```

● Timer opening

Listing Two

```
SUB CloseTimer
SHARED timerport&,timerIO&
CloseDevice timerIO&
DeleteExtIO timerIO&
DeletePort timerport&
END SUB
```

● The allocated timer resources need to be handed back before the program terminates!

```
OpenTimer&=OpenDevice&(SADD("timer.device"+CHR$(0)),UNIT_MICROHZ,timerIO&,0)
```

Prior to opening the unit a reply port and I/O request block (used for communicating with the device) need to be set up and system functions called CreatePort&() and CreateExtIO&() are available for doing this. CreatePort&() incidentally is an amiga.lib library function, but with HiSoft BASIC it is made available through a custom 'execsupport.bas' library.

Listing One shows the timer opening routine used in this month's example program and you should notice that the results of all these functions are checked for success. The value returned by CreateExtIO&() represents the base of the allocated timer I/O request structure and this contains a command field that needs to be initialised with the value TR_ADDREQUEST&. The word-sized field is reached by adding an offset value (defined as IOStdReqio_Command) onto the base address of the I/O request structure and so we poke the command into the I/O request block like this...

```
POKEW timerIO&+IOStdReqio_Command,
TR_ADDREQUEST&
```

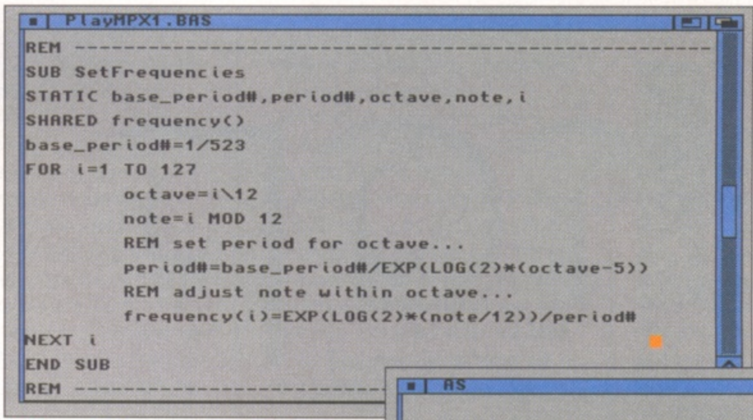
Once this initialisation has been done, using the device is very easy indeed – you simply place time delay values into the time request structure and execute the delay by making an exec library's DoIO() call.

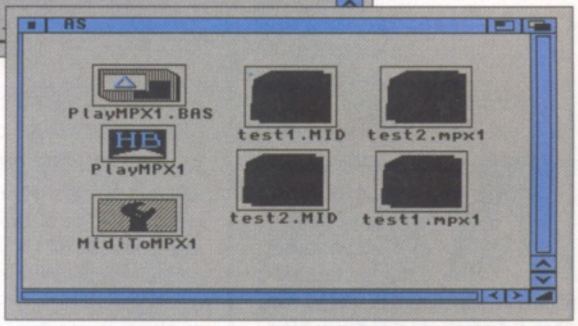
Devices, like libraries, need to be closed before a program terminates and, of course, the allocated I/O request structure and message port also need to be released. Luckily this is easy to do and as you'll see from Listing Two, it's just a matter of making three function calls – CloseDevice(), DeleteExtIO() and DeletePort()!

Listing Three

```
SUB PlayNote(note,velocity,channel,start_
event_time&,microsecs&)
STATIC duration
SHARED timerIO&,frequency()
IF start_event_time&>0 THEN
    POKEL timerIO&+tr_time+tv_micro,start_
    event_time&
    f&=DoIO&(timerIO&)
END IF
duration=microsecs&*18.2/1000000
SOUND frequency(note),duration,velocity,
channel
END SUB
```

● Once the timer device is open using it is just a matter of setting a time value and performing a DoIO() call!





Unless you like awkward maths, this frequency calculation routine is best taken at face value!

The example program, song files, and MidiToMPX1 conversion utility are on this month's Coverdisk.

Reading events from an MPX1 file

The note-on and note-off messages that the example program looks for contain three pieces of information. Like all MIDI messages, they start with a status byte that identifies the type of message and then comes a note value and a velocity byte (a sort of 'volume' value which indicates how hard a note has been hit). BASIC's INPUT$() function can be used to read these details and once a file's header bytes have been collected events can be read from the file using this type of loop...

```
WHILE NOT EOF(1)
    time&=CVL(INPUT$(4,#1))
    message_length=ASC(INPUT$(1,#1))
    status_byte=ASC(INPUT$(1,#1))
    note=ASC(INPUT$(1,#1))
    velocity=ASC(INPUT$(1,#1))
    < Here we do something with the event!>
WEND
```

The time value read into the time & variable represents the delay which should occur before the event is played. Providing this is not zero (which would indicate a delay was not needed) we poke the delay time into the time request structure and perform a DoIO() call like this...

```
POKEL timerIO&+tr_time+tv_micro,start_
event_time&
f&=DoIO&(timerIO&)
```

Note playing

The note value held in a MIDI message ranges from 0 to 127 and is based on a convention that gives middle C the value 60 with each semitone above or below this adding or subtracting one from this value. To use the BASIC SOUND command it's necessary to turn the note numbers into corresponding frequencies and I do this is by generating an array of values algorithmically (middle C, which has a frequency of 523.25 Hz, is used as a base point).

I've used the sine wave option with HiSoft's WAVE command (eg WAVE 0, SIN) to set up a playing voice although there is no reason why BLOAD couldn't be used to load a raw sound sample into a dimensioned array. Note playing, achieved using the PlayNote() routine shown in Listing Three, uses the timer device to perform a time delay and then generates a note of the required length. HiSoft BASIC's SOUND command is simple – you specify the frequency of the note you want played, its duration, the volume and the sound channel. For example...

```
SOUND frequency(note),duration,
velocity*2,channel
```

The reason for doubling the velocity value incidentally is that the SOUND command uses volume values between 0 and 255 whereas MIDI velocity bytes use the range 0-127. The original note duration values, obtained by measuring the time intervals between note-on and note-off events, also need adjustment. According to the HiSoft BASIC manual a time in seconds equals duration/18.2 so a duration calculated in microseconds need to be multiplied by 18.2 and divided by 1000,000.

Coverdisk files

You'll find an example program called PlayMPX1.bas on the disk (PlayMPX1 is the compiled runable version) along with short MPX1 test files called test1.mpx1 and test2.mpx1 and the original MIDI files). I've avoided things like the use of the asl requester in the example program to keep the code easy to examine, so the name of the file to be played is collected using a BASIC INPUT statement.

I am also only looking for messages with status bytes &H90 and &H80 (which correspond to note-on and note-off messages on MIDI channel 1) and again this has been done to minimise the amount of code present. One would normally look for note events on all 16 MIDI channels remapping them to one of the four Amiga internal sound channels.

Despite the above limitations the example should convince you that, with help from the Amiga's timer device, HiSoft BASIC can cope with music-oriented applications well. And there is plenty more that can be done, so if anyone would like further help write to me at *Amiga Shopper* and I'll get another tutorial organised! ■

Talking shop

The AS reader's lot is sometimes not a happy one, as this month's letters reflect. But **David Taylor** *points out that it's not that easy trying to keep the Amiga market alive and active...*

Another chance for you to get it off your chests and let us know what you think about the magazine, the future of the Amiga, or anything else.

Need for speed

£25 Winner

I'd like to thank *AS* for its support of the Amiga. The Amiga's current situation is frustrating, and Amiga Technologies is overdue for serious rethinking of their policies. They'll have to do better than an Internet Pack to save the Amiga.

The base model Amiga has to compete with mid-range Pentiums now as the IBM DX2 and DX4 series is almost obsolete. Most IBM software is now written with Pentiums in mind. Who wants to convert this level of software to a 14MHz 020? Or even a fast 030? While the AGA chipset can do its bitmap voodoo and make high-end Pentium users envious, with 3D texture mapped games even a fast 030 will have trouble against a mid-range Pentium.

Forget the 030, the A1200 needs a fast 040. No, not 25MHz but 33 or 40MHz. But what about the A4000? This is supposed to be a serious machine (it is priced like one) but at 25MHz it hardly is. The A4000/040 should be running at 50 and 66MHz (Yes, 66MHz 040s exist) and for around £1,100 with a monitor and quad-speed CD drive. This way it could compete with a 100MHz Pentium.

A few Amiga magazines are guilty of making out the Pentium chip to be a Speed King. A 60MHz Pentium's speed rating is only 6 MIPS up on a 25MHz 040. At 50MHz the 040 blows it away. Same with the 060. At 50MHz it has a higher rating than a 133MHz Pentium (90 MIPS compared to 70 MIPS). OK, so speed tests on different CPUs isn't an exact comparison, but it does give a fair idea of speed differences. Take games – Breathless in 1*1 mode is just as fast on an A4000/040 as Doom II on a 60MHz Pentium, and Breathless is at a higher res and has to deal with chunky to planar graphics conversions. Imagine an 040 or 060 running at 100MHz – even the fastest Pentium would be left for dust.

Anyhow, back to the A1200. Not only does it need the 040, but also some sort of DSP and 8Mb of RAM with a hard drive. All for no more than £750 with a monitor (around the same price as a 75MHz Pentium in Australia). Not only would it make software easier to convert to the Amiga, but it would show software developers Escom's level of commitment to the machine, surely making some sit up and take a serious look. Most of the ex-Amiga owners I know are just waiting for a machine like this and they will gladly jump back on the Amiga bandwagon from their IBMs.

And why are Amiga accelerators and RAM so dear? I can buy an 8Mb SIMM from an IBM dealer for £75, while an Amiga dealer sells the same SIMM for £200. Same with accelerators. The 060 is £600 while a 166MHz Pentium with motherboard is £175. I'm sure Amiga users are sick of hearing the 'we don't sell enough units to bring the price down' excuse. At such extravagant prices Amiga owners cannot afford to upgrade. There are millions of Amiga users out there. An 060 with no RAM needs to be no more than £250 and a fast 040 £150 at the most. The 68x series is almost obsolete anyhow. At lower prices, I bet every one of those millions of Amiga owners could afford to upgrade. It can't be the CPUs that are causing the high prices. While an A4000/040 is £2,100, a 66MHz 040 Macintosh with CD drive is only £1,100.

Escom and some Amiga peripheral manufacturers are shooting themselves in the feet. Maybe an avalanche of letters would convince Escom to change strategy. So come on all you dedicated Amigans, do it for your favourite machine. Write to Escom as I have. It may be scraping by in Europe, but in Australia, as with America, the Amiga is nearly dead. That would be a shame as the Amiga is the single reason most ideas in modern computing exist. Whether in music or TV or games, the Amiga has been behind nearly all revolutionary ideas.

Lastly, is there a CD^{32} expansion in the pipeline allowing the use of A1200 accelerators? I have pulled my CD^{32} apart and it seems a feasible idea.

Clint Edwards,
Queensland, Australia

The difference between the Amiga market and the PC one is that PC owners are not as enthusiastic about their machines, so they see them purely as a means to an end. And because getting the job done is so important to them, they are perhaps more prepared to continually upgrade. It's costly, but it guarantees them productivity.

With higher sales, comes lower prices, but why Amiga SIMMs are more expensive is a mystery. Maybe Amiga owners will, or rather would, pay more.

As you rightly say, the Amiga market needs to emulate the PC trend. To break the stagnation, new, exceptionally fast machines are needed and people must buy them. But pricing is going to hurt. The 060 chip is expensive and it will make machines pricey and I think that anybody spending over £1,000 on a computer is going to expect PC compatibility.

What's more, the Amiga OS needs updating. Comparing the look of Workbench to Windows 95 makes the Amiga look dated. Nobody likes working in a dingy office and the same goes for computers. A flash looking Workbench is more likely to encourage the novice to get an Amiga over a PC, than the current look compared to Windows 95 which looks the more friendly and powerful. Now that Escom have departed and VIScorp hold the key, perhaps we will see a phoenix rising with real muscle.

As to the CD^{32}, a new CD^{32} module is due out and the talk is that it will allow a faster CPU. Watch this space!

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All letters will be considered for publication, unless you specifically advise us otherwise.

Disk warning

I am 67 years of age and not some young kid. I am writing to complain about the Coverdisk on AS64. I have an A600 2Mb, no hard drive,

just the basics. I enjoy programming and have written some games and utilities, some of which are in PD. But I cannot afford to splash out on expanding my equipment, nor can I afford to waste £4.50 on a mag that has a Coverdisk which is useless to me.

There is no warning of what the Coverdisk requires to run, until you buy the mag and then it's too late. I have tried using this disk with the equipment I have and all I end up with is a crashing computer and programs that require things that are not available to me.

All in all what I have for my £4.50 is a bit of PD, dealers, some AMOS which I need like a hole in the head, and a paper thin magazine. Not very good value. Surely I should be able claim back the wasted money from you – after all you didn't put a warning on the front of the mag about the disk?

Mr E Molyneux,
Braunton, Devon

There is that line on the disk that says 'Requires Workbench 2', which is exactly what the disk requires to run. Some of the programs are WB3, which I assume you don't have, but many aren't, including the software for the DIY project that enables you to expand your machine in a novel direction very cheaply.

All I can say is that if you don't think we offer the magazine you want, don't buy us. Some people think we're worth the money, others don't and I think it sensible if those who do, buy the mag and those who don't, don't. That's not supposed to sound abrasive, but we can't tailor each issue to individual readers and a certain amount of pride in AS dictates that I defend us.

But as an attempt to make up for your disappointment, I have sent you a complimentary copy of this issue, which has some other programs that might be of interest to you. Some require WB3, but we can only include programs that are released and many of the best have higher system requirements.

Very poor

Just how much more can us poor Amiga owners take? How gullible do you think we all are? To offer a magazine with 20-odd pages less than normal, reduce it to one disk and then, to add insult to injury, increase the price! I hope you sleep well at night! Perhaps you should reflect on the text found at page three under the heading 'Better Value for Money'. May I suggest that it now contravenes the trade descriptions act?

David Taylor is incorrect if he believes *AS* readers have only one solution. Next month's circulation figures will reveal that some of us will take a separate option. Good magazine? Yes it was.

RA Whitehead
Bedford

I sleep well on a pile of money with many beautiful women. Yet again, the loss of pages was not a decision made by me, but by an equation in a spreadsheet, as is the size of any magazine. The magazine will cease when it is no longer profitable. It is, after all, a business venture from a publishing house, not a charity.

My point about subscribing was that buying from the newsstand costs more and offers less. Subscribers get an extra disk and if people want to buy Amiga Shopper, *I'd prefer them to get the best value for money we can offer. Yes, the price hike will lose us readers, but not as many as closing the magazine would.*

PC defector

I have been a subscriber of *AS* because I like the articles, presentation and Tutorials. But I have transferred my subscription to *PC Plus*, another Future publication. I am not abandoning my lovely A1200 (1.1 Gig hard drive, Blizzard1230/IV accelerator board et al), as I shall use it for all the many things it is good at – indeed better than the PC.

But I live in the real world and I cannot see the point in not taking advantage of the things that are better about the PC, first of which is the price. My friends at First Computers in Leeds built me a new Prima 100 Pentium mini-tower with a Microvitec monitor, 6x Panasonic IDE CD-ROM and 16Mb RAM plus loads of goodies – they even swapped my 16Mb SIMM from my Amiga for the two 8Mb in my PC and for the price at which I bought them!

I now have my new PC and my Amiga side-by-side – they share a SCSI component in my 'Zip' which I shall use to swap information between formats. I rejected using the Siamese system because I do not want to share a keyboard or monitor between the two systems and I had problems with plugging and un-plugging the Squirrel in my fragile PCMCIA slot. That meant finding another SCSI for my peripherals and I fitted the Blizzard SCSI kit to my Blizzard accelerator – the Siamese system will not work with that board, so I sold my HiQ workstation and bought a PC.

I now have my Amiga with a proper 25-pin SCSI connector where the blanking plate next to the mouse was and a very fast and efficient Amiga plus a nice new Pentium PC. I still talk about my lovely Amiga while referring to my PC as nice because when I switch on the machines side-by-side, the Amiga is up and running long before the PC. Why? Because the Amiga has an infinitely better OS than MSDOS and it completes its self-analysis checks while the PC is still messing about putting up pretty screens with clouds on saying it is loading Windows 95.

Having said that, once it is up and running there is no noticeable difference in speed, but the PC graphics and sound are better than the Amiga's, which is to be expected since the Amiga technology is 10 years old whereas the PC is state-of-the-art.

Back to my change of subscription. *AS* has two disks and as I have no need for the shareware programs, at £4.50 it is too expensive. *PC Plus* comes with a CD-ROM and 355 pages – a lot of these are ads, but for things in which I have a current interest, so for £3.99 it represents better value for me. So thanks for everything and goodbye – I wish you and all my fellow Amigans everywhere good health, happiness and prosperity!

Ian Aisbitt,
Bedale, North Yorkshire

Yup, bust PCMCIA ports, don't you just love them. I sit with my machines side-by-side and the Amiga is so much faster to get started with, it's embarrassing. I'm sorry to see another reader leave, but I understand your reasons – it is people like you who have spent money on their hobby that has kept the Amiga alive. You should also check out the PC Answers' CD-ROM – I think you'll find it has been compiled superbly to match readers' needs. ■

Amiga pamphlet?

I have just received the latest issue of *Amiga Shopper*. At first I thought it was some form of supplement or a trial copy. It took a while for me to realise I was actually holding the July issue.

I read the 'Inside Issue' on page three in which you claim loss of advertising revenue as the reason. I find this difficult to believe as I also subscribe to one other Amiga magazine and occasionally buy two others, none of which appear to be suffering from the same problems as you because they all have at least twice as many pages as you. I accept the other magazines have pages set aside for games reviews which are of little interest to me, but this cannot account for all of the extra pages.

I have always considered *Amiga Shopper* superior to all the other magazines and have been a subscriber since the first issue. But I will not be renewing my subscription when the current one expires unless the price is drastically reduced or the magazine is returned to its former glory. Do you really expect people to pay £4.50 for a 'magazine' which is little more than a pamphlet or Sunday supplement? You and other magazines are always saying how much you deplore piracy – surely this must be put in the same category, because your magazine can now only be described as a rip-off.

Ray Tryhorn,
Warminster

So you're not happy about the loss of pages? I understand your anger, but it was not a decision that we had any control over. Just because you see other mags with masses of adverts doesn't mean they are thriving. How much do they charge for those adverts? How many of them are actually paid for? Is the company prepared to subsidise the mag as it is the last foothold they have in the market?

We may have lost pages, but we still have strong and useful editorial and offer advice that other mags can't touch. As to piracy, if it didn't exist there'd be more software and sales and hence more adverts and more magazine. Not spending money on the market furthers the spiral.

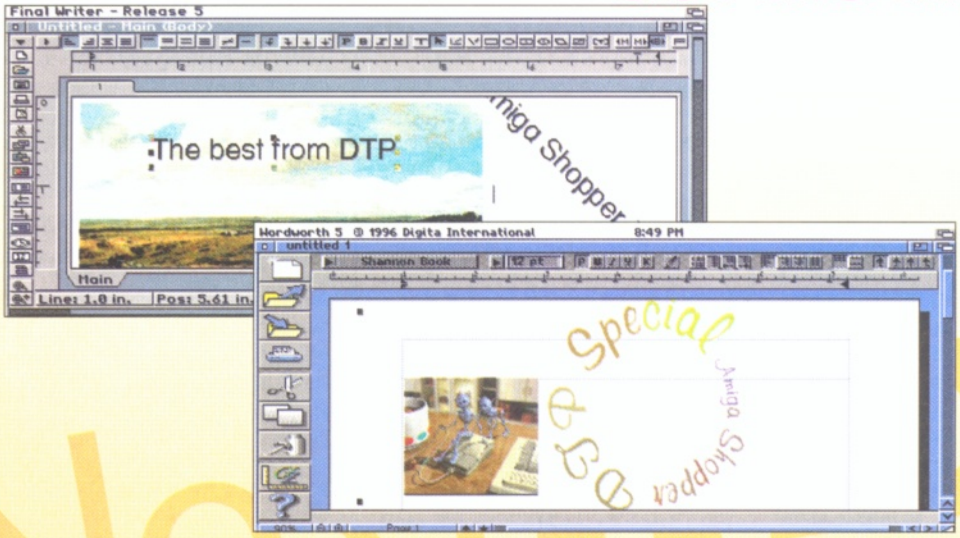
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Issue 68

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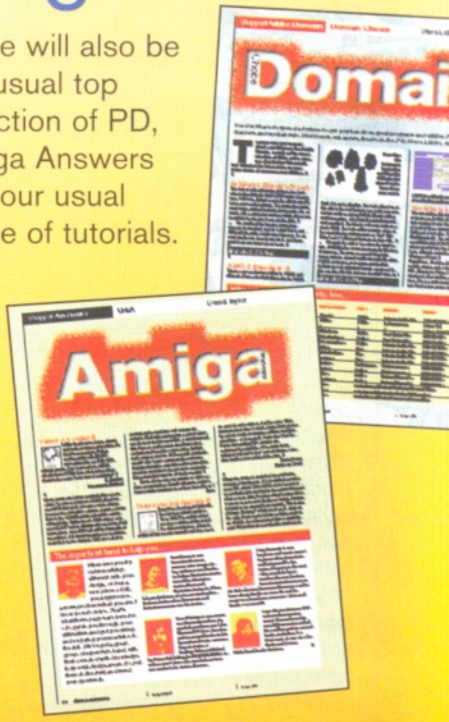
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Reviews of the new CD32 module and hot new software as well as anything we can get our grubby hands on will await you. This should include a new accelerator for A4000 owners, Storm C, Video Master and lots more.

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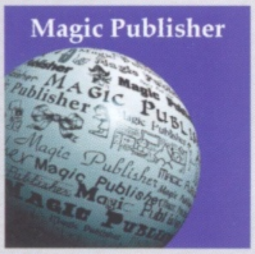
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Aminet Set 2

AMINET SET 2, dated November 1995, consists of approximately 4 gigabytes of software in 12.000 archives. Whether you like applications, games, communications or programming, the SET gives you all you need. Easy to use index files and search facilities make accessing it a pleasure. £34.95



Aminet 12

Still available! £14.95



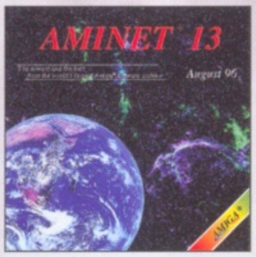
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AMINET SET 3, dated July 1996, consists of approximately 4 gigabytes of software in 9.000 archives. Also included are full versions of Imagine 4.0, XiPaint 3.2, OctaMED 5.0 and some commercial games. Whether you like applications, games, communications or programming, the SET gives you all you need. 95 MB Utilities, 79 MB Documents, 408 MB text software, 12 MB Disk/HD tools, 7 MB Hardware related, 756 MB Pictures & Animations, 208 MB Graphics software, 394 MB Graphics & sound demos, 563 MB Games, 64 MB Miscellaneous, 685 MB Music modules, 28 MB Music software, 131 MB Communications, 91 MB Development Software, 88 MB Business software. Easy to use index files and search facilities make accessing it a pleasure. £39.95



Aminet 13

Aminet CD 13, dated August 1996, consists of approximately 1,1 gigabytes of software in 2400 archives. Since the release of Aminet CD 12 more than 800 MB new software has appeared. The current edition has a special focus on animations, several hundred animations from the internet were included. User friendly access software makes the Aminet CD 13 a pleasure to use. £14.95



NetNews Offline Vol. 1

NetNews Offline Vol. 1 is the first disk of a new bimonthly published series of Amiga CD-ROMs which contains all Amiga-related newsgroups from the internet. Every volume features about 50.000 articles which contain hot rumours, important information about all aspects of the Amiga, press-releases, discussions and flame wars, ... A newsreader is included. NetNews Offline is the cheap alternative of getting in touch with Usenet. £14.95



Amiga Developer CD v1.1

The official developer CD from Amiga Technologies contains all the material you need to start developing software forAmiga computers. This includes: The CD32 developer package. In addition to the original five disk set distribution you will find the "Build-CD" CD writer package Packages contributed by 3rd parties: The WBPath and ActionFSSM packages, courtesy of Ralph Babel; The Envoy v2.0 developer kit, courtesy of IAM, Inc.; The INet 225 developer kit, version 2, courtesy of Interworks, Inc.; The Kiskometer package, courtesy of Angela Schmidt; The Enforcer v37.64, courtesy of Mike Sinz. Information in support of forthcoming operating system developments. Additional developer material: BOOPSI gadget and image classes; The AmigaOS 2.04 example code, as part of the original 2.04 Native Developer Kit; The RKM 2.04 code examples; The complete set of registered IFF forms; IFF example and stress test files; All IFF packages released by Commodore-Amiga, Inc., covering 1986 through 1992; The camd v37.1 MIDI developer kit; The SANA-II standard package and developer kit; The Installer v43.1 package. International support material: Sample text using the full ISO-8859-1 character set; Translation guidelines. The updated 3.1 Native Developer Kit: "C" and assembly language header files, linker and runtime libraries; System documentation and tutorial texts; Example code covering the Amiga OS 3.0 and 3.1 features; The NewIFF v39 package; The AmigaGuide and DataTypes documentation and example code. Reference material: The collection of AmigaGuide Volume 1 articles, covering Spring 1987 through January/February 1989; The complete AmigaGuide Volume 2 articles in AmigaGuide format, covering January/February 1990 through March/April 1993; also included are the printable issues in PostScript and PageStream format; Hardware related articles; The Includes & Autodocs in AmigaGuide format. £14.95



Gamers' Delight II

This CD contains 1070 games for the Commodore Amiga from differing categories. Action, Jump & Run, Card Games, Puzzles, Strategy Games - a whole range of computer entertainment awaits! Gamers´ Delight will hold you captivated for hours and guarantees long-lasting pleasure. 70 games are commercial versions - no public domain & no demos! This CD can be run on any Amiga with CD-ROM drive,1 MB free memory and Joystick/Joypad. £26.95

All products are available in your local Amiga-shop or through national mail-order-companies

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